Outdoor Living Areas Advisory Document

Price: $3.00

Aussi disponible en français

Canada Mortgage and Housing Corporation

Société canadienne d'hypothèques et de logement

Honourable Paul Cosgrove
Minister

ISBN 0-660-10593-4
Cat. No. NH18-2/4E

92-05859/

CONTENTS

Foreword 1

Introduction 3

Part I: General Planning Issues 7
What is an outdoor living area? 9
Who needs an outdoor living area? 11
What size and shape should an outdoor living area be? 13
When may an outdoor living area be above grade? When should it be at grade? 15
How much privacy should be provided in an outdoor living area? 17

Part II: Detail Design Issues 21
Access from the dwelling 23
Front to rear yard access 25
Boundaries 27
Noise 29
Sunlight and shade 31
Wind 35
Good Detailing 37

Part III: Case Studies 41
1. Suburban condominium townhouse project 42
2. Stacked and row dwellings: parking remote 44
3. Inner-city high-density project with family units 46
4. Inner-city infill project 48

Part IV: Appendices 51
1. Background to the design advice 51
2. Checklist 53
3. Definitions 55

Index 57

FOREWORD

This publication is one of a series of advisory documents prepared by Canada Mortgage and Housing Corporation. They are to be used in conjunction with *Site Planning Criteria,* metric edition, which contains site planning objectives for housing financed under the National Housing Act.

The preparation of this publication, *Outdoor Living Areas: Advisory Document,* was assisted by the consulting firm of Klein and Sears, Research/Planning/Architecture.

All phases of the project were supervised by a CMHC management committee: John Archer, Project Manager.

Comments and suggestions are invited to further develop the material presented and should be addressed to:

Director
Technical Research Division
National Office
Canada Mortgage and Housing Corporation
Ottawa, Ontario
K1A 0P7

INTRODUCTION

Canada Mortgage and Housing Corporation has the mandate to promote the achievement of a good quality residential environment. The objectives for the site planning of the individual dwelling and groups of dwellings are set out in *Site Planning Criteria*, metric edition. These site planning criteria are organized into four sections dealing with the location of housing, the development of sites, houses on conventional lots and comprehensively planned housing projects. Within each of these sections, objectives for the use and design of space about the dwelling are set out.

The provision of an outdoor living area is one of the aspects of site planning for which criteria have been established. *Site Planning Criteria*, metric edition, sets out the following:

OUTDOOR LIVING AREA

Intent

Residents have a need for an outdoor living area (OLA) immediately adjacent to the housing unit to accommodate a variety of individual outdoor activities.

Discussion

In addition to adequate living space within the unit, residents need amenity space which is both visually related and physically adequate to their unit and which can be used for individual outdoor activities.

The OLA should be capable of being defined, enclosed and personalized by the residents in order to ensure sufficient privacy, security and identity within the area and to permit residents to carry out a wide range of outdoor living activities such as children's play, sunbathing, cooking and eating, gardening, entertaining friends, keeping pets, clothes drying and storage.

Not only must the OLA be large enough to accommodate these activities but it is important that it be appropriately accessible to the unit, be well drained and have a suitable orientation and enclosure to maximize the seasonal use of the space.

Since many of these activities require a private environment, screening should be provided. In some instances it may be appropriate to completely enclose the space whereas in others partial screening may be adequate. However, it should be possible to see out from a part of the OLA in order to take advantage of interesting views, to supervise children's play in adjacent areas and like activities.

For units above grade the depth of the balcony terrace is especially critical to ensure there is sufficient space for activities such as outdoor eating, sunbathing and entertaining. Terrace or balcony enclosures should be specifically designed for children's safety and should create a sense of being able to see without being seen. The enclosure should avoid horizontal elements which will serve as a foothold for children to climb over and should provide a place where children can see through. The enclosure should be designed to prevent toys and other articles from rolling off the balcony.

In high-rise structures special attention should be given to the design of the enclosure for balconies or terraces in order to reduce the effects of the increased wind and air turbulence created around tall buildings. Attention to this problem can greatly extend the seasonal use of these types of OLA.

Requirements

Housing units at grade A landscaped outdoor living area (OLA) shall be provided immediately adjacent to and accessible from the dwelling unit. The total area of the OLA shall be equal to at least one half (1/2) the gross finished floor area of the dwelling unit or 45 m^2 whichever is the lesser. The OLA shall consist of one uninterrupted space and shall not be made up of left-over side yards, strips of front yards, etc.

The OLA shall be screened in a manner which prevents seeing into a part of the space from adjacent areas at a normal standing eye level.

Access to the OLA for servicing purposes shall be provided by a means which does not necessitate passing through a main living area of the unit.

This OLA shall be calculated as part of the Minimum Amenity Area.

Housing units above grade For all family units (two bedrooms or more) located above grade where the OLA is in the form of balconies or terraces this space shall only be included in the calculation of the MAA if it has a minimum clear dimension of 2 m and 50% of the perimeter of the OLA is enclosed by an exterior wall, screen or projection of the building.

Site Planning Criteria advises a basic minimum amount of space for the provision of an outdoor living area. However, a variety of solutions are possible and desirable. The advice presented in this publication has been prepared to stimulate informed design decisions that will lead to functional and satisfying outdoor living areas particularly as they reflect local conditions, opportunities and the needs of known occupant groups. They are based on a study of user needs conducted by the consultant. This study undertook field research across Canada and reviewed available literature on the subject. A summary of the findings of the study are provided in Appendix I.

Outdoor Living Areas: Advisory Document is organized into four parts. Part I presents five general planning issues which must be considered in the provision of an outdoor living area. Part II discusses detail design issues. Each issue is presented as a problem requiring a decision. To guide that decision a performance criterion or criteria are provided. At the end of each issue, design suggestions and examples are provided.

In Part III several project types are illustrated to demonstrate the application of the guidelines. A checklist which sets out basic project data is provided. Part IV, the Appendices, contains a discussion of the design advice, a blank copy of the checklist and a list of definitions.

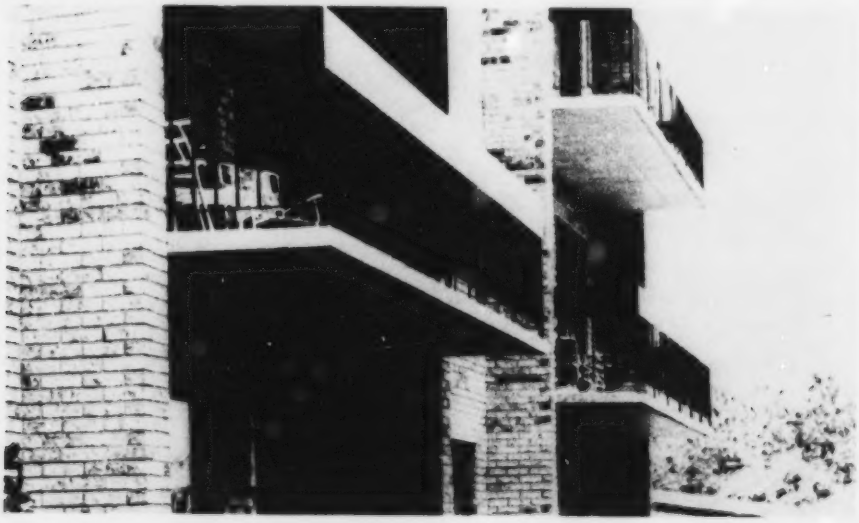
PART I: GENERAL PLANNING ISSUES

At an early stage in the preparation of the site plans for a housing project, basic decisions affecting the provision of outdoor living areas should be made. Part I raises five issues in the form of questions the designer should consider in the development of housing layouts and the organization of exterior spaces about individual dwellings.

WHAT IS AN OUTDOOR LIVING AREA?

Small yards adjacent to a common area can meet a variety of needs for outdoor living in family housing.

Balconies are a common form of outdoor space which, if properly designed, can be used for outdoor living.



Issue

Many everyday living activities occur outside the dwelling. Examples are children's play, adult socializing, home maintenance and various forms of recreation. However, the ease with which any of these activities can be undertaken is affected by the size, location, microclimate and detailing of that exterior space.

Performance Criteria

For an exterior space to be an outdoor living area it must:

- be a size and shape that will accommodate the everyday activities of the occupants
- be immediately adjacent to the dwelling
- have boundaries by which occupants can define their "territory"
- be capable of providing a desired level of privacy and security.

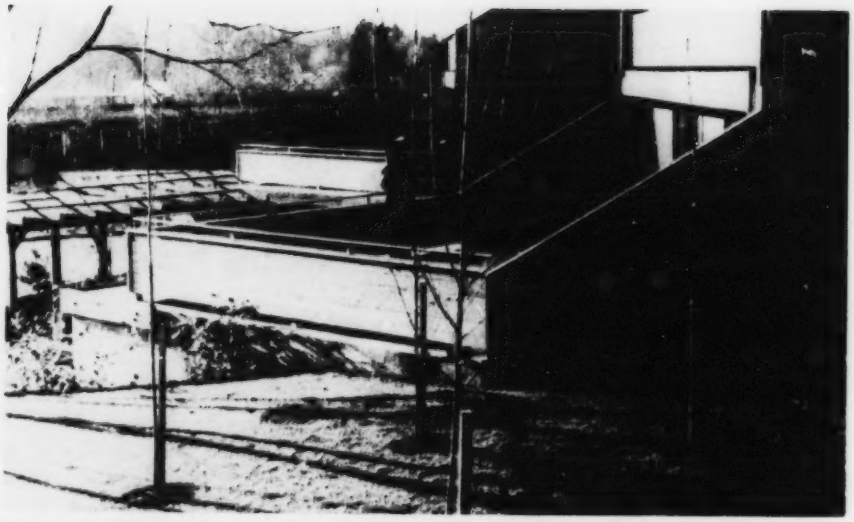
Design Suggestions and Examples

Outdoor living areas can take a wide variety of forms depending on climate, location, expected level of amenity and use. Typical Canadian solutions have been:

- back yards
- small yards adjacent to a larger common space
- balconies
- terraces.

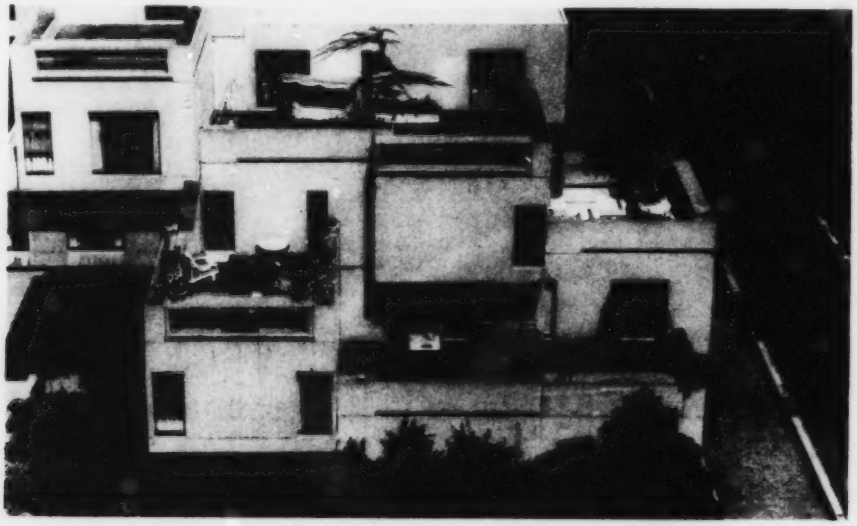
Less common but quite acceptable examples are:

- front yards
- courtyards
- roof patios
- piers or sea decks.



Terraces are generally larger than balconies and more closely related to grade.

Roof patios can make effective use of a frequently forgotten space. Problems of privacy and overlook must be carefully considered.



WHO NEEDS AN OUTDOOR LIVING AREA?

An outdoor living area that can accommodate a variety of uses and activities is important to maintaining the long-term value of a dwelling.

Issue

An outdoor living area is a simple and effective way of providing the amenity area of a residential environment. For some occupant groups this outdoor living space is essential; for others it is not critical and may not even be appropriate. However, because a well-designed outdoor living area contributes to a dwelling's long term potential to provide an attractive residential environment for a variety of users, its provision should be given high priority in the design and planning of all housing. Where physical and cost constraints exist it is important that the decision to provide an outdoor living area be related to the needs of the people who it is known will occupy that housing.

Performance Criteria

The provision of an outdoor living area should be based on expected need. Therefore, always provide an outdoor living area:

- for family housing
- in housing for individuals with restricted mobility such as the handicapped and the elderly
- when it can be achieved economically and effectively.

Design Suggestions and Examples

All ground-related dwellings with two or more bedrooms have potential as family housing and should be provided with an outdoor living area.

Outdoor living areas for the infirm or handicapped should accommodate wheelchairs and other wheeled appliances. Door swings, hardware and location of handrails and changes in elevation must allow ease of access and use.[1]

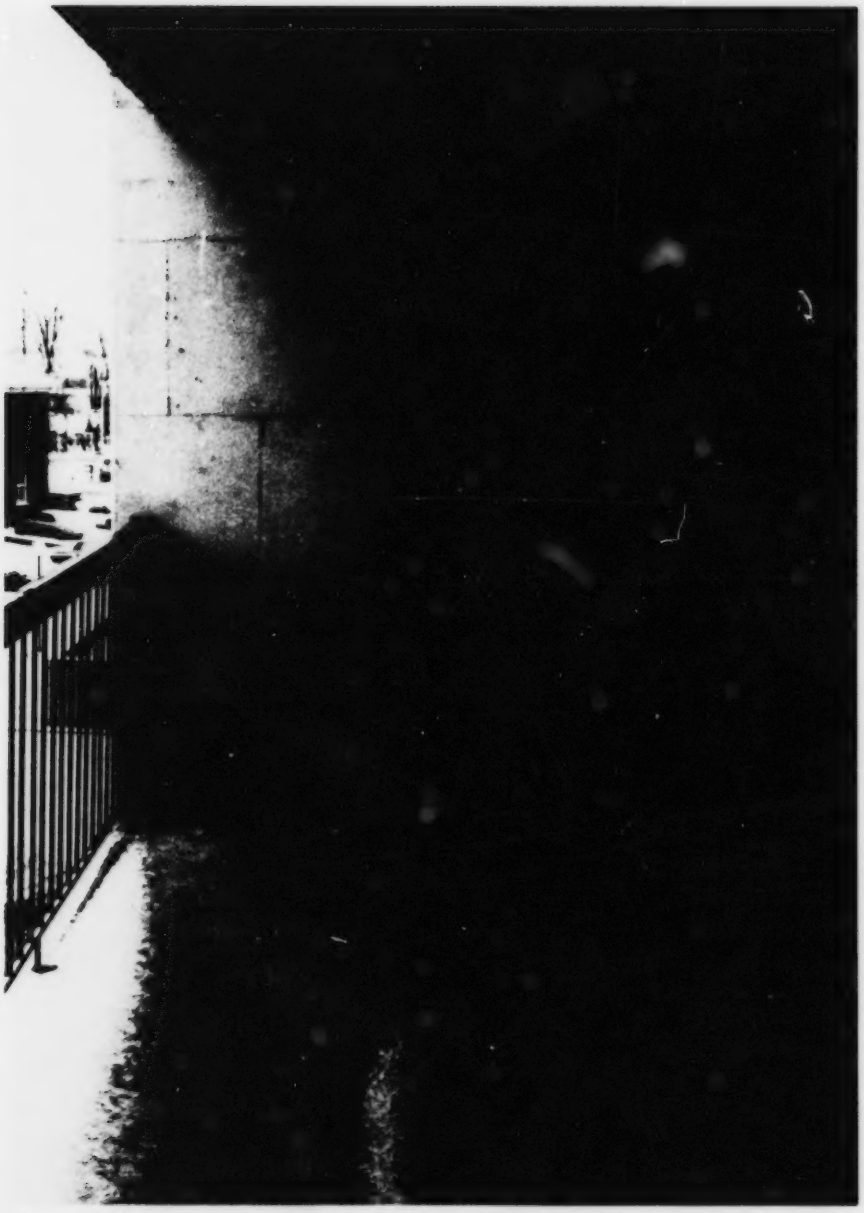
Housing for the elderly should provide an individual outdoor living area for each dwelling.

For those with restricted mobility, an easily accessible outdoor living area is very important.

An outdoor living area in housing for the elderly is important not only for the recreation potential it offers but also for the opportunity it provides for individual expression.

[1]For details refer to Supplement No. 5, National Building Code of Canada, *Building Standards for the Handicapped*.

WHAT SIZE AND SHAPE SHOULD AN OUTDOOR LIVING AREA BE?



A long, narrow balcony has limited use as an outdoor living area.

Issue

The size and the shape of an outdoor living area are critical factors because an OLA must be capable of accommodating the regular day-to-day activities of the occupants. However, the activities of one group will vary from those of another. Generally, the larger the outdoor living area, the greater range of activities it can accommodate. Shape can constrain these activities. Therefore, the goal in planning for outdoor living must be to maximize the amount of usable space.

Performance Criteria

The size and shape of an outdoor living area must permit the following to be undertaken with ease:

- in family housing, a variety of family activities including the active play of several preschoolers
- in non-family housing, a variety of generally passive activities
- in handicapped housing, two wheelchairs and a small table together with circulation space.

Design Suggestions and Examples

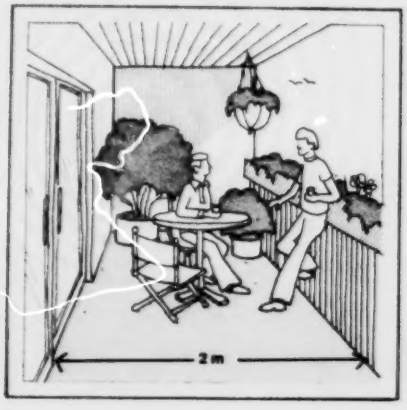
An outdoor living area for family occupancy should have a minimum dimension of 5 m and an area equal to 1/2 the dwelling floor area or 45 m^2, whichever is smaller.

An OLA for non-family housing should have a minimum dimension of 2 m and a minimum area of 6 m^2 at grade and 4 m^2 above grade.

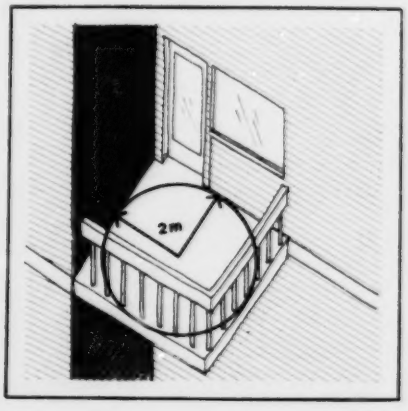
An outdoor living area in housing for the handicapped should have a minimum dimension of 2 m and a minimum area of 6 m^2. Details for the planning of environments for the use of the handicapped may be found in the CMHC publication *Housing the Handicapped* and *Building Standards for the Handicapped*, Supplement No. 5, National Building Code of Canada.

An outdoor living area for the handicapped should be large enough to manoeuvre wheelchairs.

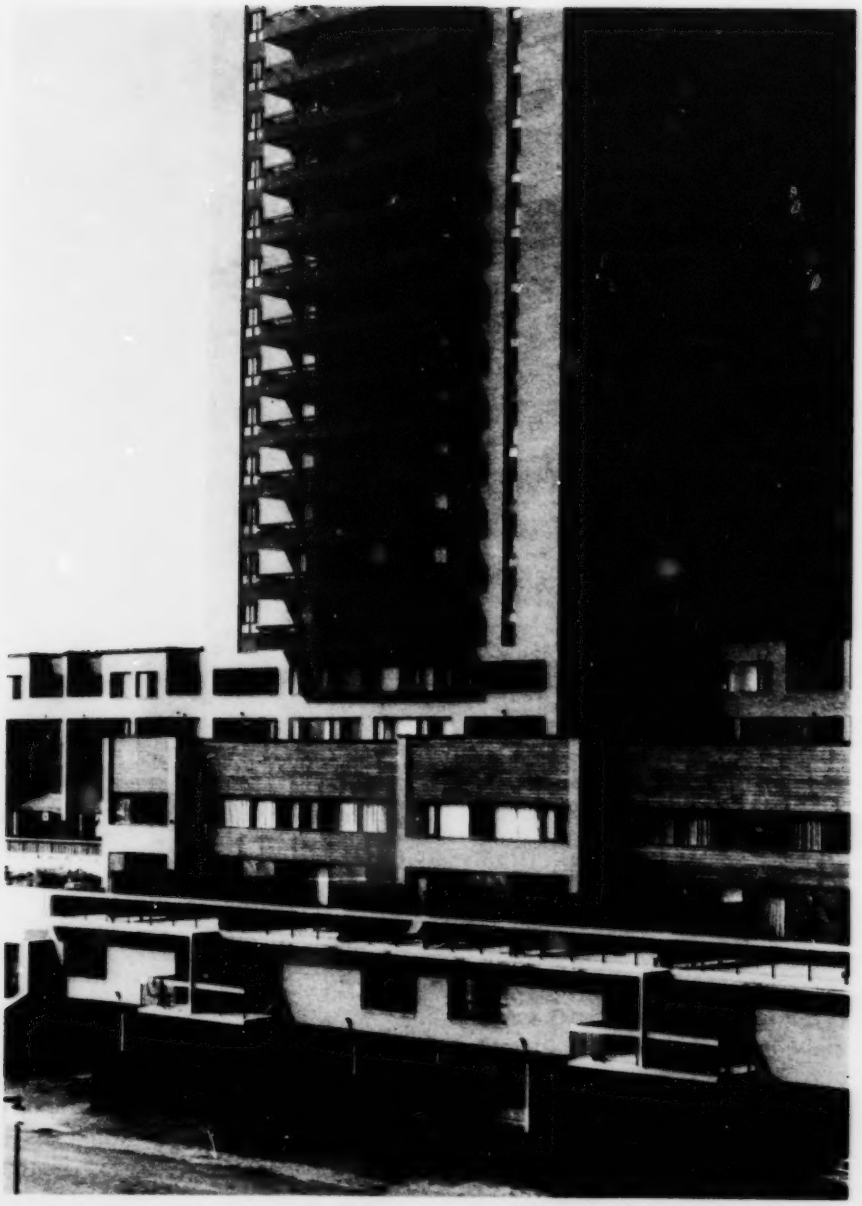
A balcony should be at least 2 m wide.



A well-designed outdoor living area 2 x 2 m may be sufficient for smaller non-family dwellings above grade.



WHEN MAY AN OLA BE ABOVE GRADE? WHEN SHOULD IT BE AT GRADE?



Family housing should be at grade or at least provided with good access to grade. Non-family housing can be at or above grade.

Issue

The physical and social activity needs of children indicate that outdoor living areas for family housing have requirements pertaining to minimum size, ease of supervision and the desirability of good access to neighbouring family housing and community amenity areas. Planning constraints and construction cost can complicate the provision of an acceptable family outdoor living area above grade.

There are fewer constraints on providing non-family housing with an outdoor living area above grade. Access to good views and more passive use make this type of outdoor living area very appropriate for short tenure and people without young children. However, climatic extremes may make outdoor living areas in very tall buildings inappropriate.

Performance Criteria

The overall planning of a housing project should be influenced by the feasibility of providing an outdoor living area appropriate to the intended occupants:

- family housing should have an outdoor living area at grade or closely related to grade
- outdoor living areas for the elderly or the handicapped should be within 18 m of grade

- outdoor living areas for dwellings higher than 18 m should be provided whenever a good view is available and protection from high winds and other climatic extremes is feasible.

Design Suggestions and Examples

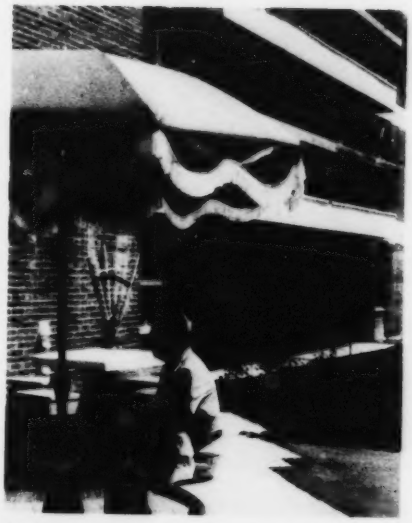
Outdoor living areas for family use have traditionally been provided by the rear yard space in detached, semi-detached and row housing. This site planning arrangement continues to be highly valued and should be considered the normal solution to the problem of providing an outdoor living area.

The desired attributes of an at-grade outdoor living area can also be provided for dwellings ostensibly above grade which are grouped around a large roof deck or podium that has been extensively developed as an artificial ground.[2] Such roof decks should not be more than two storeys above the natural grade.

The elderly, the handicapped and others with restricted mobility can suffer from isolation. An outdoor living area for these people should provide contact with events on the ground. For most people the maximum distance at which facial expressions and speech can be recognized is 18 m. Therefore, the outdoor living area for those with restricted mobility should not be higher than five storeys.

Balconies on tall apartment buildings are often provided whether or not the spaces are usable or offer some special attraction such as a good view. A realistic appraisal of their contribution to the amenity area of each apartment should be made early in the design process. It may be more sensible to provide some other feature when the balconies could not be intensively used because of their exposure to the elements.

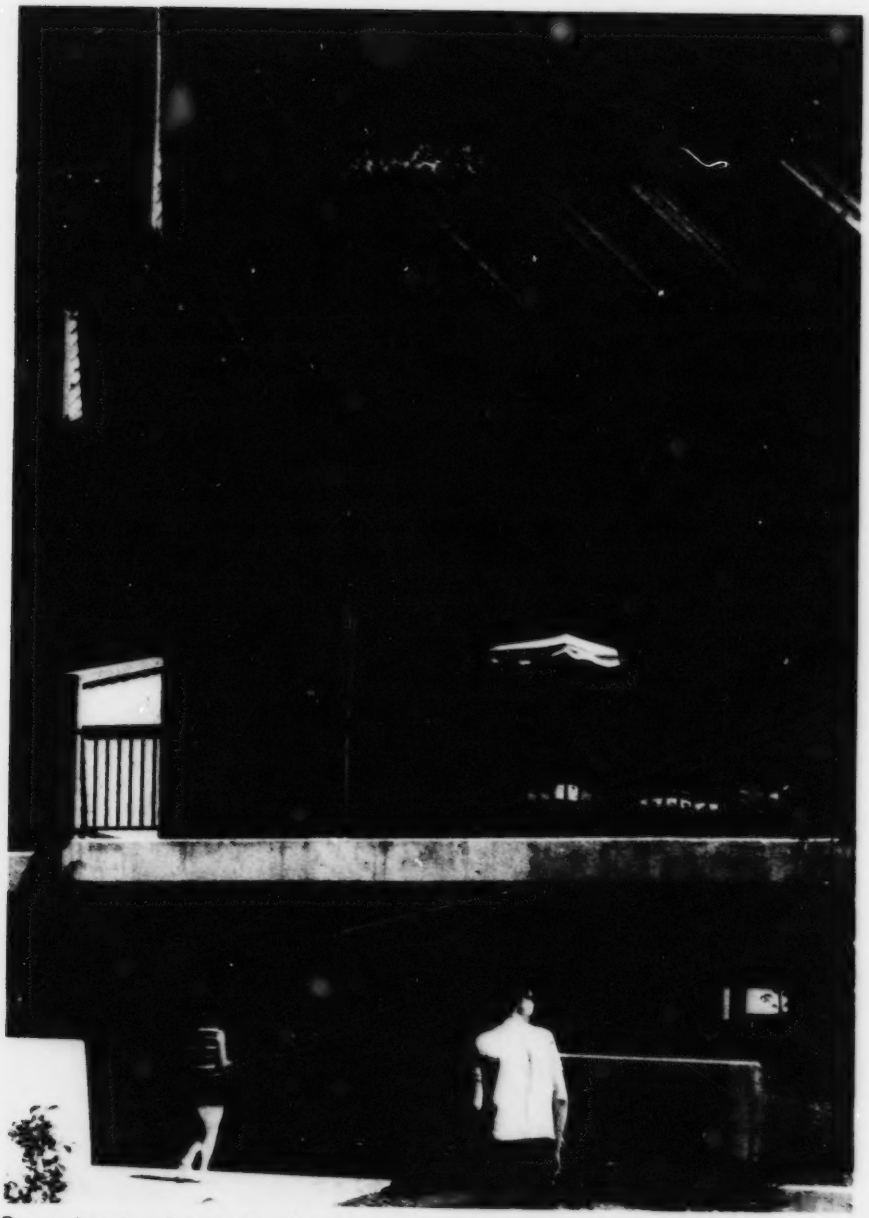
An outdoor living area for family housing at grade provides the opportunity for a close relationship with community facilities.



A close connection with events at grade is important for those with restricted mobility.

[2]For advice on the design and planning of roof decks, see Central Mortgage and Housing Corporation, *Roof Decks: Design Guidelines*. (Ottawa: CMHC, 1978).

HOW MUCH PRIVACY SHOULD BE PROVIDED IN AN OUTDOOR LIVING AREA?



Comprehensive planning should maximize access to sunlight and a view but retain privacy in each outdoor living area.

Issue

Just as the inside spaces of a dwelling require an appropriate measure of privacy for the occupants to be able to undertake a normal range of day-to-day activities, so does the outdoor living area. With sufficient privacy, an outdoor living area can be used for sunbathing, entertaining or simply the quiet enjoyment of the outdoors.

At the same time, sunlight, ventilation and a good view can contribute significantly to the enjoyment of an outdoor living area. A balance between this open quality and a level of privacy appropriate to the needs of the occupants and the opportunities available on a site should be achieved.

Performance Criteria

Maximize available opportunities for a view and access to sunlight and ventilation in the overall site planning of a residential project.

Make a part of each outdoor living area visually private or capable of easily being made private by the occupant.

Design Suggestions and Examples

Sufficient separation space will provide both a feeling of open space and privacy:

- a distance of 18 m between the outdoor living area and other areas should be adequate because at this distance, most people can no longer distinguish facial expressions or understand speech carried on at a conversational level
- the separation space should not encourage active uses, or provide a short cut to another location
- this very open approach is most suitable where maintenance of shared open space is provided.

A passive-use, landscaped, open area next to the outdoor living area can provide a feeling of open space while remaining sufficiently private.

A combination of separation space and screening can allow more intensive development, while still providing privacy and a feeling of open space:

- plants of appropriate size can be used to control short- and long-range views

Plants can be used as effective screens and to orient views.

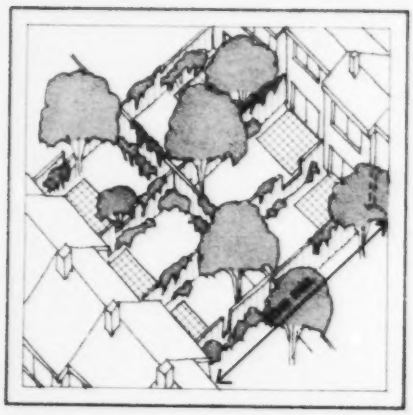
The comprehensive planning of the outdoor living area can ensure privacy while at the same time providing good access to community facilities.

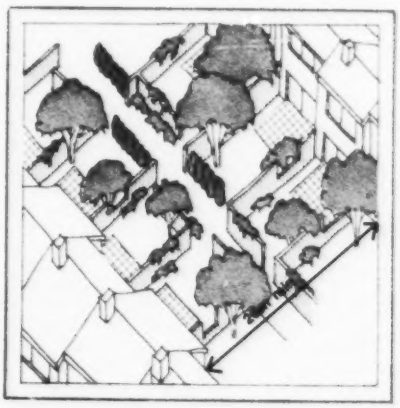
- this approach may be very suitable where the site planning allows access from the outdoor living area to a community facility, such as a children's play space.

Where the density of a residential area does not allow for a great deal of separation space, screening should be strategically located around the outdoor living area so that the occupants can obtain privacy in at least a part of it:

- a number of site planning devices can be used to increase a sense of open space while still maintaining privacy: the dwelling and the outdoor living area can be oriented at an angle, rows of facing dwellings can be staggered and the introduction of a variety of sizes and

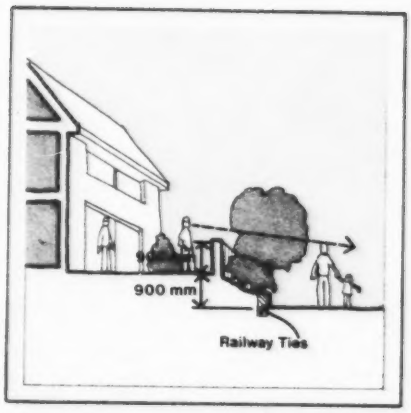
Where little or no separation space is provided between outdoor living areas, emphasis should be given to controlling views into the space.



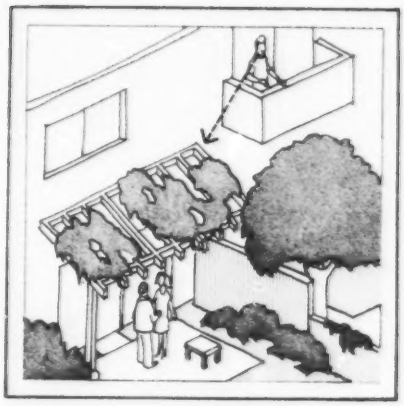


shapes to the outdoor living area can be used to good effect.

- where the outdoor living area is higher than an adjacent public area, open space and privacy are possible.
- screening from overview can be important when an outdoor living area is adjacent to multi-storey buildings.



A lower screen can provide both a feeling of open space and of privacy when the outdoor living area is at a higher elevation.



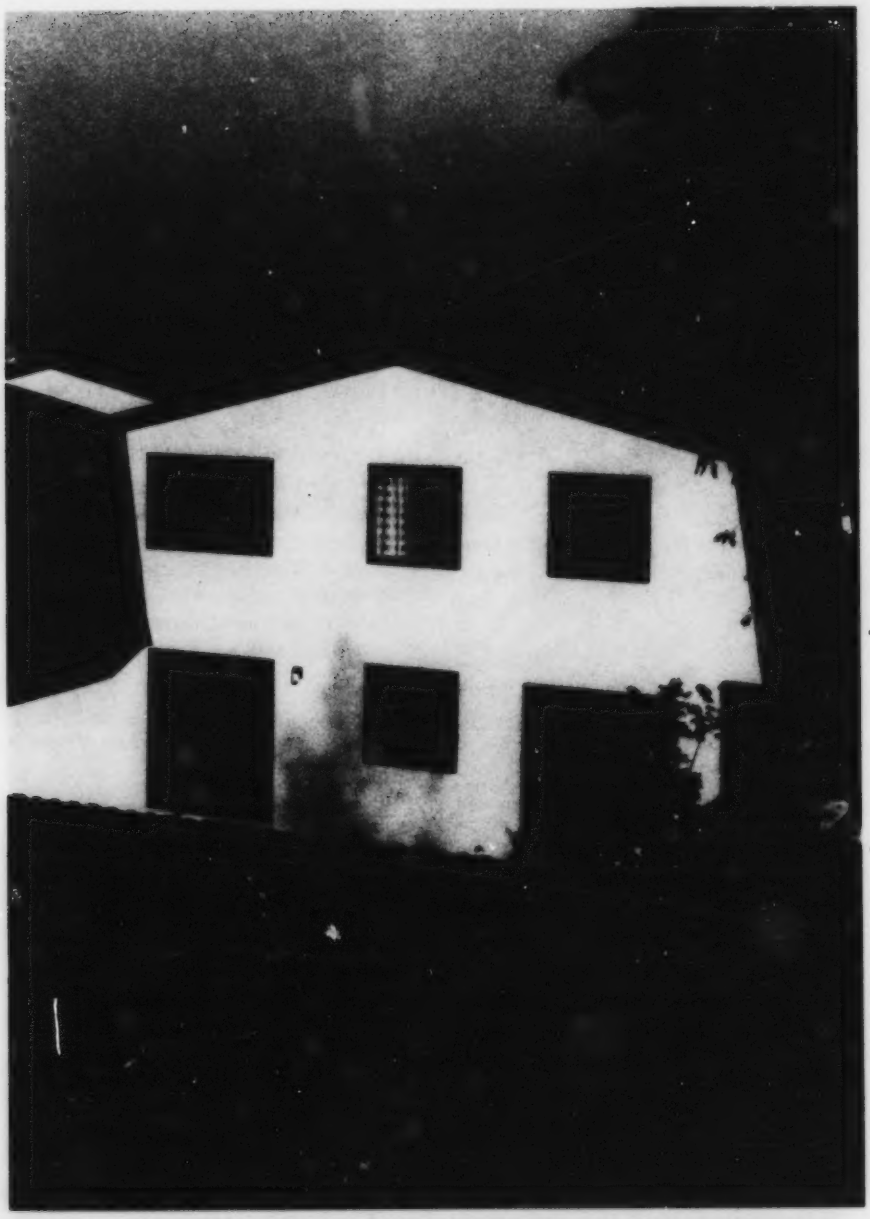
A pergola or trellis can be used to control overview.

PART II: DETAIL DESIGN ISSUES

Part I of this advisory document looks at the provision of outdoor living areas from a broad perspective. It seeks to influence the site planning of a residential environment at an early stage of the design process.

Part II focuses on more specific problems. It is intended to guide the design of individual outdoor living areas.

ACCESS FROM THE DWELLING



An outdoor living area should be thought of as a room and be planned as an integral part of the circulation system of the dwelling.

Issue

An outdoor living area works best when it is a natural part of the inside spaces and circulation system of the dwelling. Activities should be able to flow from inside to outside with ease. If physical access is inconvenient and the area is visually separated from the inside of the dwelling, its use as a living area is hindered.

Performance Criteria

The location of visual and physical access points should maximize the potential use of the outdoor living area. Therefore:

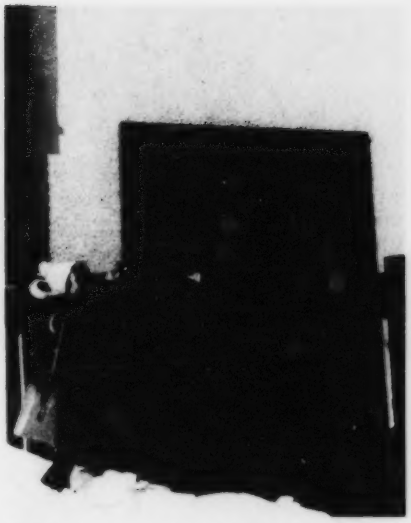
- provide a direct visual connection between the outdoor living area and one or more principal habitable rooms of the dwelling. In family housing it should be possible to supervise the play of small children while working in the kitchen.
- provide convenient physical access to the outdoor living area by a means which does not pass directly through the principal living room of the dwelling. This is particularly necessary for the removal of wet or muddy coats and boots.

Design Suggestions and Examples

The provision of more than one access to the outdoor living area from the dwelling will increase its usefulness. One entry point should be directly related to an interior space having an easily maintained floor finish. A second entry point, such as through the main living room, can be used during good weather.[1]

Access points between the outdoor living area and the interior areas of dwellings for the elderly, as well for the handicapped, should permit the easy manoeuvring and passage of a wheelchair. This criterion should guide the design of access to all dwellings.

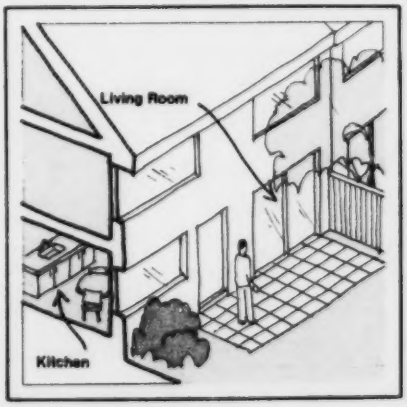
An outdoor living area at the main entry to the at-grade dwelling provides an acceptable way of achieving visual and physical access. However, some municipalities may not allow privacy screening along public streets.



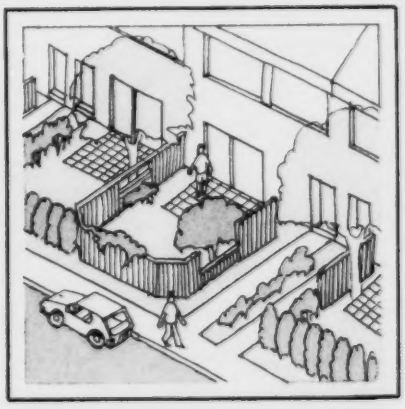
Children's play in the outdoor living area should be easy to supervise from inside the dwelling.

Housing for the elderly and the handicapped should be planned for wheelchair access. Door openings, thresholds, changes in elevation and surface material are important considerations.

A second access such as patio doors off a main living area will allow the inside spaces of the dwelling to be open during good weather.



An outdoor living area at the front of a dwelling should be well screened from the street.



[1]Use of sliding glass doors may be inappropriate in areas where energy conservation is a concern.

FRONT TO REAR YARD ACCESS

Good access to the outdoor living area from the street is important. Problems can result if maintenance equipment and material have to be brought through the dwelling.

Issue

In addition to recreation and socializing, an outdoor living area may also be used for gardening, small building projects and undertaking maintenance and repair of the dwelling. Often these activities require that material and equipment be transported from the front of the building to an outdoor living area at the rear. If they have to pass through the interior spaces of the dwelling, wall and floor finishes may be damaged.

Performance Criteria

Whenever possible, provide access to the outdoor living area by a means which does not necessitate passing through the living spaces of the dwelling.

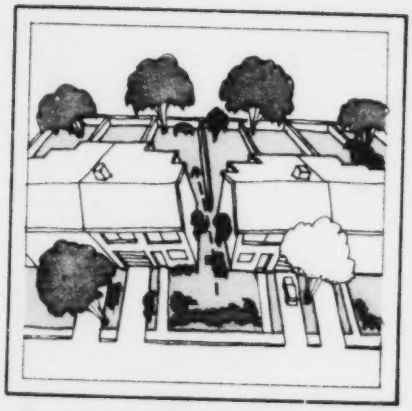
If it is not possible to provide exterior access to the outdoor living area, the inside spaces of the dwelling should be planned so that it is not necessary to pass through a habitable room.

Design Suggestions and Examples

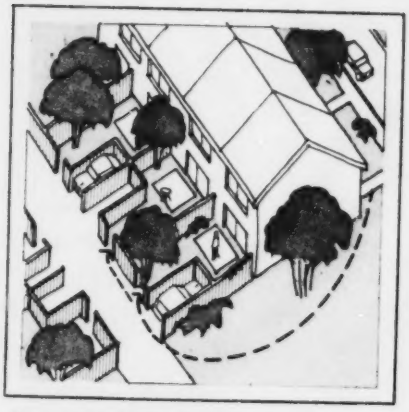
Detached and semi-detached house forms provide front and rear yard access via a side yard.

In row housing, access to an OLA at the rear of the dwelling can be provided in three ways:

- a rear lane, path, or common open space. Solutions which require long round trips to go from front to back are not acceptable. A travel distance of 100 m should be considered a maximum.
- an attached garage. A full-size garage door at both ends of the garage will provide access for a wide variety of purposes.
- through the dwelling (the least acceptable solution). However, if necessary, access may be provided through a basement space or a hallway. Flooring material in these areas must be resistant to wear and tear and staining and be easy to clean.

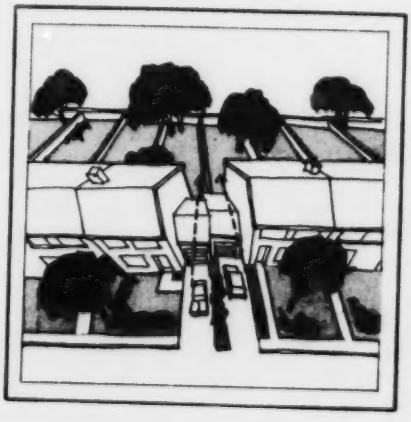


A side yard provides good individual access; 1 m of clearance should be sufficient to allow passage of most material and equipment.

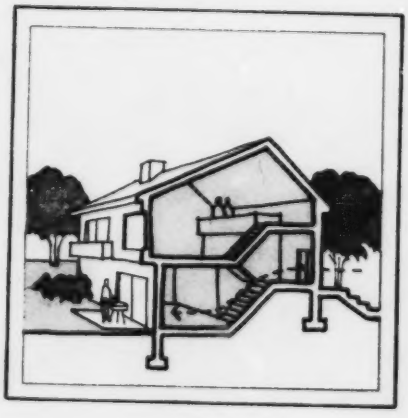


Access by a lane or path or through a common open space is acceptable.

Access through an attached garage is acceptable.



The least acceptable solution involves passage through the dwelling. Carrying materials up and down stairs can be a problem.



BOUNDARIES

A privacy screen and a better definition of the boundaries of this exterior space are necessary for it to be considered an outdoor living area.

Issue

In rental, cooperative and condominium tenure, the distinction between shared areas and those which the occupant understands to be for his own use can be ambiguous. This lack of a boundary can severely restrict the use of an outdoor living area. The occupant may even be subject to unwanted intrusion.

Performance Criteria

Whenever possible, provide an outdoor living area that can be enclosed and personalized by the occupant.

If it is not appropriate to enclose the outdoor living area, at least provide a clear distinction between the boundaries of the occupants' space, their neighbours' and public space.

Design Suggestions and Examples

Fencing, walls or plants can be used to define an outdoor living area. In many cases, a symbolic rather than a functional enclosure is all that is required to prevent unwanted intrusion.

To create a feeling of spaciousness, a boundary to the outdoor living area can be provided with changes in grade elevation or changes in ground surface material.

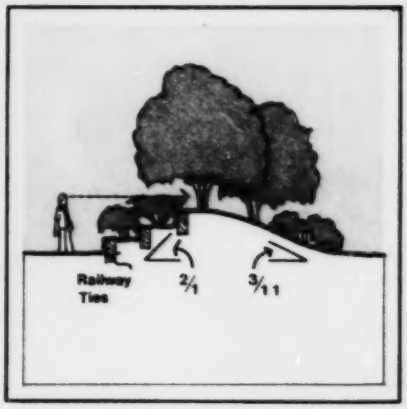
Berms can be used in conjunction with fencing or plants to provide a physical or territorial separation. The width of the berm will normally be about six times its height, but can be increased with terracing.

Trepassing can be a serious problem in family housing.

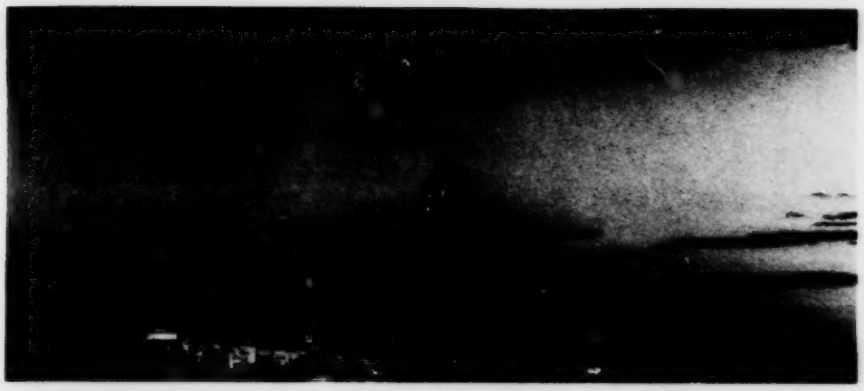
Fencing, walls or plants can be used effectively to define private areas while retaining the area's open, natural character.

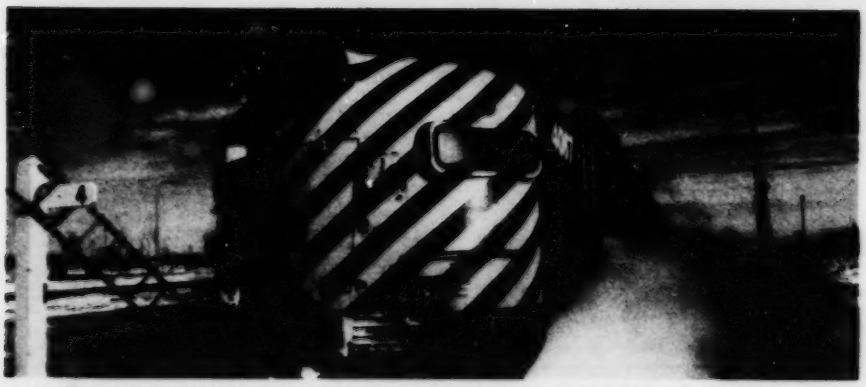
A raised outdoor living area provides privacy, a good boundary definition and a view.

A berm can provide a good boundary but requires a lot of space.



NOISE





Noise from adjacent roads, rail lines and airports can seriously affect the residential environment.

Issue

Noise from busy streets and adjacent public areas and sound reflected between facing multi-storey buildings can prevent the quiet enjoyment of an outdoor living area.

Performance Criteria

The design and planning of a residential development should consider the noise characteristics of adjacent areas. A measure of the acceptable acoustical quality of an outdoor living area is the ease with which people may carry on a normal conversation. Therefore, the general maximum ambient sound pressure level in any outdoor living area should not exceed 55 dBA.[2]

[2]CMHC publications *Road and Rail Noise* (NHA 5156) and *Airport Noise* (NHA 5185M) should be referred to if it appears that a problem exists.

Design Suggestions and Examples

Distance, buildings, berming and plants can be used separately or together to reduce the impact of adjacent noise sources. For example:

- the outdoor living areas can be located so that the dwelling unit is between them and the noise source. Row housing makes a more effective sound barrier than does a detached house form.
- extensive berming, combined with plants, can be used to create a sound barrier. The plants do not provide much sound attenuation but they create the illusion of doing so.

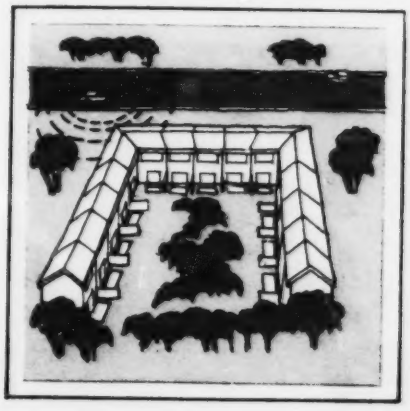
Solid masonry provides good acoustic separation.

If the noise source is immediately adjacent to the outdoor living area, a solid masonry wall may be required.

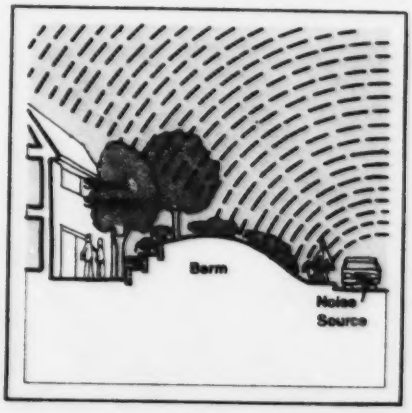
To prevent the build-up of sound pressure levels, adjacent multi-storey, multi-unit buildings should be located so that building faces are not parallel to each other.

Where site constraints do not allow building faces to be angled away from each other, measures should be taken to ensure that noise from outdoor living areas does not disrupt use of adjacent bedroom areas. Where there may be a noise problem, bedroom windows should face away from the noise.

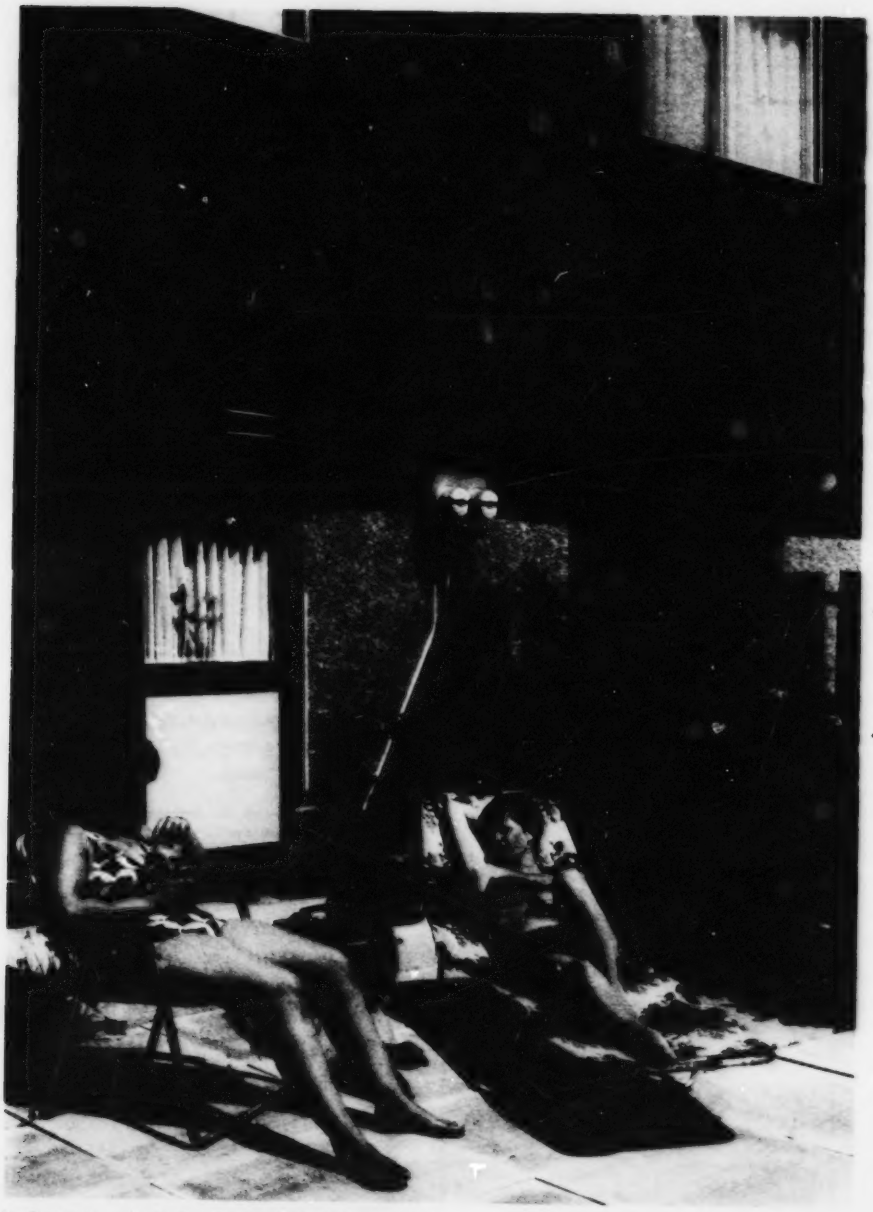
The outdoor living areas should be on the quiet side of the building.



Earth berms are very effective sound barriers. They must be high enough to separate the noise source visually for someone standing in the outdoor living area.



SUNLIGHT AND SHADE



In Canada, orientation for sunlight is important.

Issue

A balance of sunlight and shade is an important factor influencing the attractiveness of an outdoor living area. An orientation which provides an appropriate amount of sunlight can substantially extend the seasonal use of an OLA by encouraging winter as well as summer activities. Too much sun can cause problems of glare and heat build-up.

Performance Criteria

In order to maximize the opportunities for sunlight and shade:

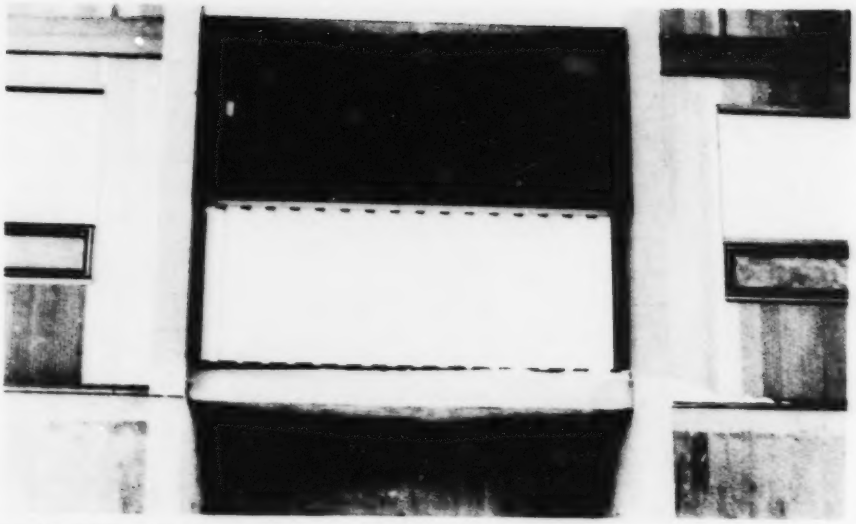
- locate the outdoor living area so that at least one half its area can receive two hours of sunlight per day throughout the year.
- provide a means whereby the occupant can screen a part of the outdoor living area from unwanted sunlight.

Design Suggestions and Examples

East, south and west orientations generally provide adequate access to sunlight; however, overshadowing from adjacent tall buildings may be a problem. When in doubt, sunlight studies should be undertaken.

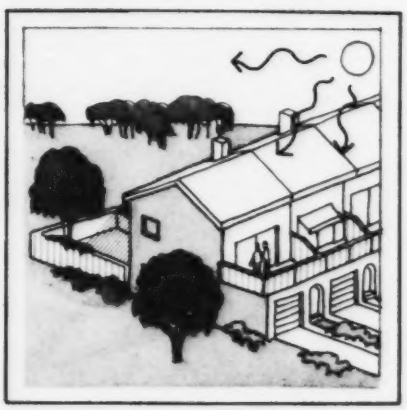
Where other site constraints impose a northern orientation to the outdoor living area, ground-related dwellings could be provided with a small exterior area such as a balcony having a southerly orientation, suitably private and large enough for two adults to sunbathe.

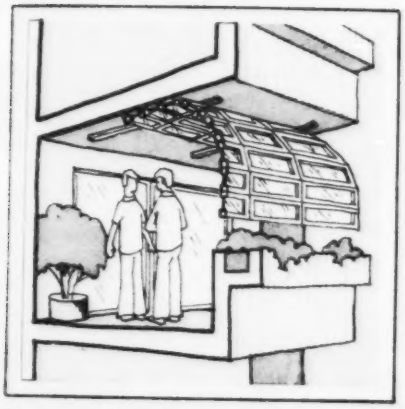
Where an outdoor living area above grade is recessed or has solid wing walls, care must be taken to ensure the adequate penetration of sunlight. Open guardrail designs should be considered and good southerly orientation provided.



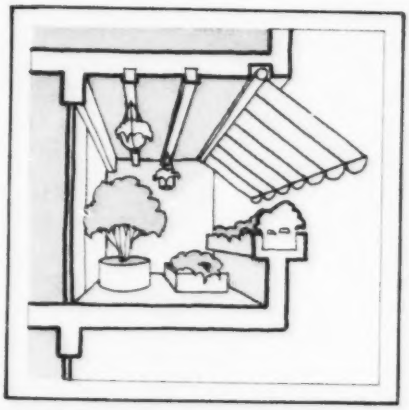
Deeply recessed balconies may not receive adequate sunlight.

An outdoor living area on both sides of the dwelling can provide a variety of views and climatic conditions.





Roll-down glazed shutters or a removable storm sash can extend considerably the use of an above-grade outdoor living area.

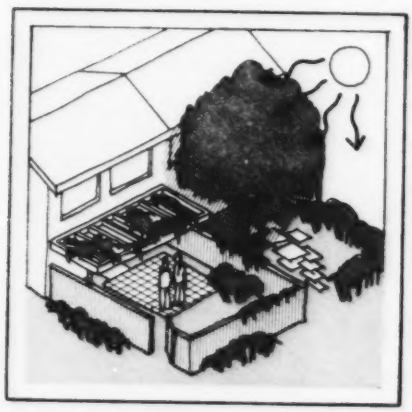


Hanging plants and awnings provide effective and interesting screening. Recessed nailing strips and hooks will allow the occupant to meet his own needs.

Outdoor living areas above grade can suffer from excessive heat build-up at certain times of the year. Fastening points for adjustable awnings, shutters, blinds or hanging screens will allow the occupant to control the penetration of sunlight.

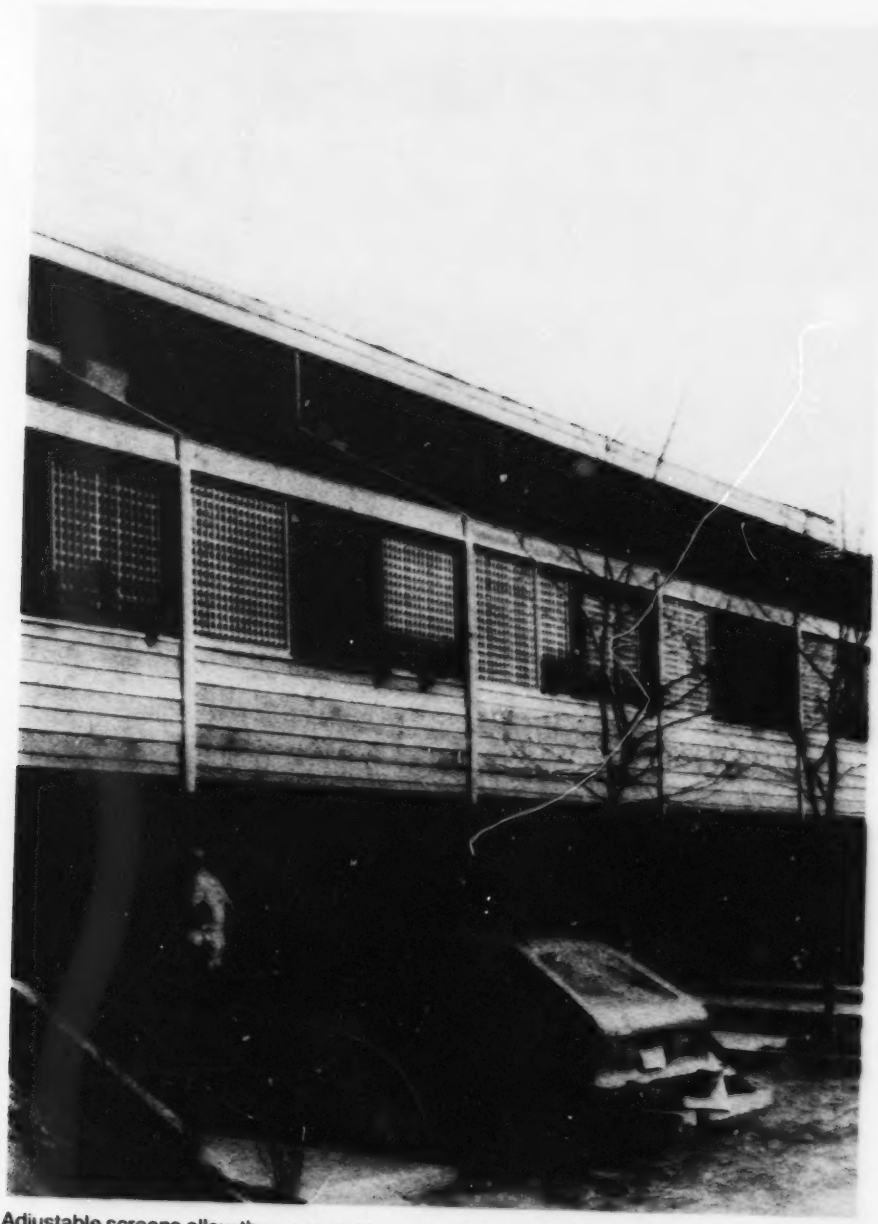
A strong western sun late in the day can produce a severe glare problem in the outdoor living area and in the dwelling if windows face in that direction. Orientation and screening can be used to alleviate this problem.

Trees and trellises can reduce the heat load on the dwelling and in the outdoor living area.



Deciduous trees provide shade in summer and sunlight passes through their leafless branches in winter.

WIND



Adjustable screens allow the occupant to control both sunlight and wind.

Issue

Shelter from strong winds and access to cooling breezes are important for extended use of the outdoor living area. The designer must be aware of seasonal and prevailing wind conditions, as well as potential problems with wind turbulence. Outdoor living areas above grade require more careful planning than those at grade.

Performance Criteria

Shelter the OLA from strong prevailing winds.

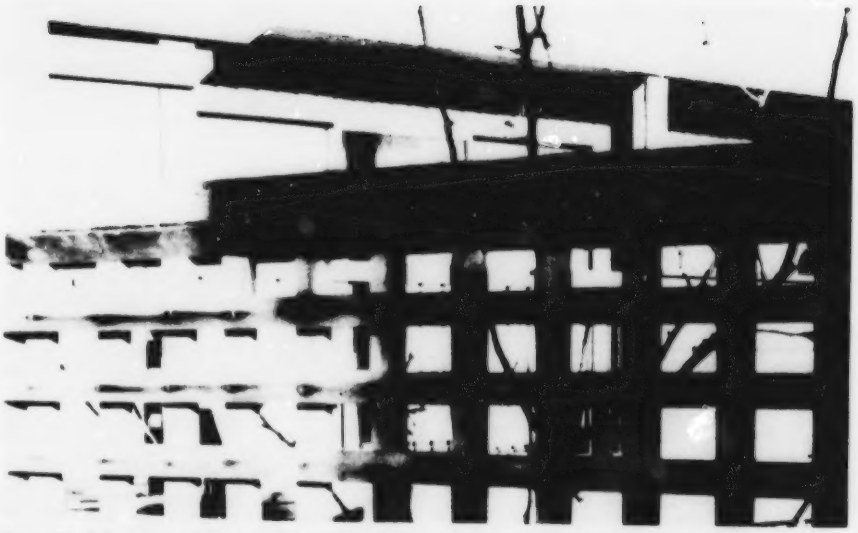
Where wind turbulence can be expected, provide adjustable wind screens.

Design Suggestions and Examples

When the direction of strong prevailing winds is known, the outdoor living area should be located on the leeward side of the dwelling.

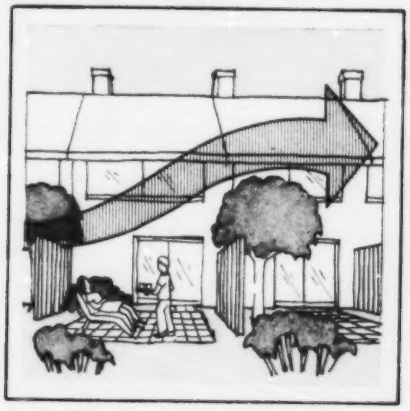
The effects of strong winds can be substantially reduced through the use of semiporous screens. Plants can also be particularly effective as wind screens for outdoor living areas at grade.

Outdoor living areas around tall buildings can be very susceptible to the effects of wind turbulence. Canopies and large deciduous trees can be used to moderate these winds.

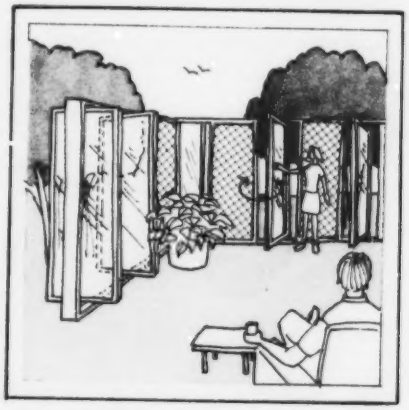


A semisolid screen provides better protection from the wind than does a solid screen, such as a wall or fence, which creates turbulence on the lee side.

A well-designed wind screen can shelter an area whose width is two or three times the height of the screen.



Adjustable screens that either slide or rotate can allow cooling breezes to pass through on hot days and provide protection on windy days.



GOOD DETAILING

Perhaps the most important principle to be followed in detailing the outdoor living area is that of providing support for the occupants' own efforts to adapt and use this exterior space according to their own needs and ideas.

Issue

Despite good overall planning, the full potential of an exterior space as an outdoor living area may not be realized. The source of this failure often lies in small inconveniences which discourage its use.

Performance Criteria

Maximize the use of the outside space as a living area in which the occupant can conveniently undertake a wide range of everyday activities.

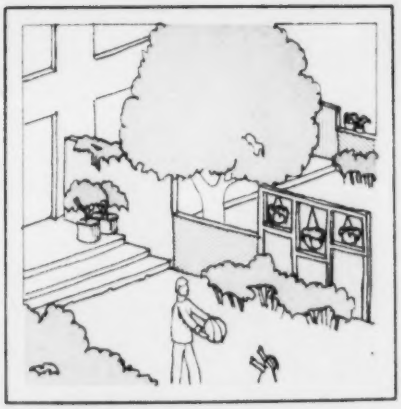
Design Suggestions and Examples

A light fixture in the outdoor living area will allow nighttime use. Fixtures should be wall-mounted and designed to direct light downward and away from adjacent bedroom windows and other outdoor living areas.

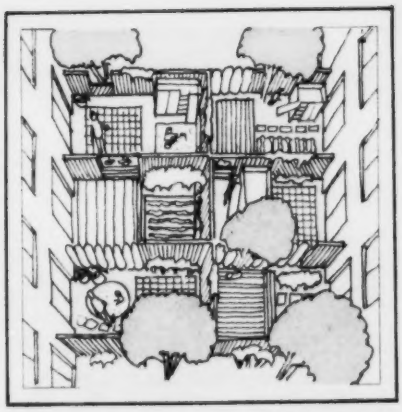
A weatherproof exterior electrical outlet should be provided. Outdoor living areas at grade should also have an exterior hose bib.

A variety of material should be used in the screening and surfaces of the outdoor living area at grade to reflect different activities. Plant use should be tempered by consideration of maintenance requirements.

Outdoor living areas should be provided with a place to store equipment and material. A storage unit 1200 x 600 x 1200 mm high will accommodate lawn furniture and children's toys. A large unit, 1800 x 900 x 1800 mm high, can also accommodate tools and maintenance equipment.

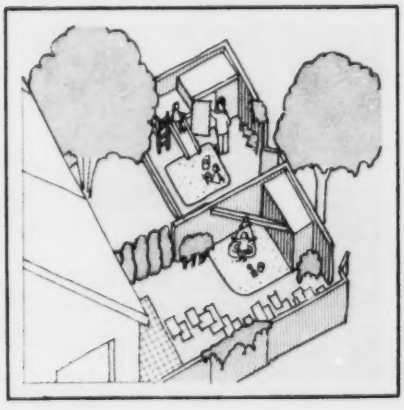


A variety of screen heights and material will help alleviate the "corral" effect.



Changing the surface material used in the outdoor living area can create zones of use and good visual variety.

Storage units for children's playthings can be used for play and as privacy screening.



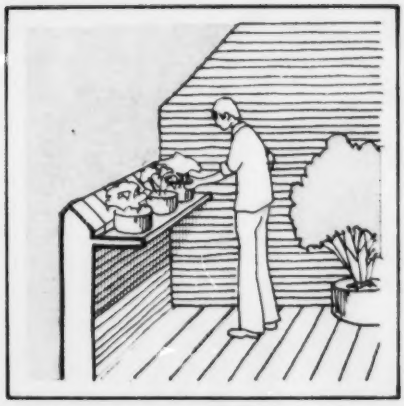
A hard surface allows use of the outdoor living area when the ground is wet.

Outdoor living areas at grade should have a hard-surface area at the main point of access to the dwelling. An appropriate size would be 2000 x 2500 mm.

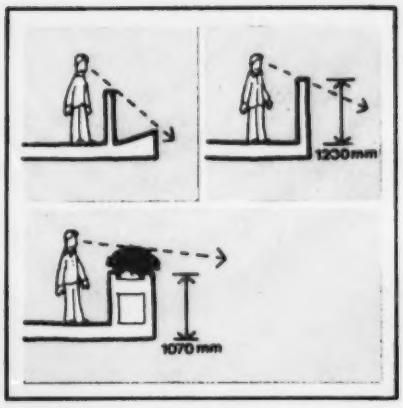
A slope away from the dwelling should be provided. A minimum slope of two per cent should provide adequate drainage.

The design of the guardrail or balustrade in outdoor living areas above grade must be safe.

- It must not allow children to squeeze under or through open spaces. It must not offer a foothold for climbing.
- It must discourage the placement of objects along the top of the railing or at the edge of the floor. Falling plant pots have been known to kill passers-by.
- It must both provide and appear to provide substantial physical security from falling. (The use of solid panels can increase the sense of security.)



A ledge on the inside of the guardrail or balustrade, 150 mm below the top edge, will keep objects from falling.



Fear of heights can be reduced by restricting views over the edge using a variety of guardrail designs.

PART III: CASE STUDIES

Introduction

The purpose of this section is to illustrate how the design advice for outdoor living areas may be applied to a specific project.

A series of case studies is presented. Each includes a checklist and a site plan. The case studies are intended to demonstrate the process of using the advice rather than provide prototypical examples of "how-to-do-it."

A blank copy of the checklist has been provided as Appendix 2 for your use.

SUBURBAN CONDOMINIUM TOWNHOUSE PROJECT

DESIGN GUIDELINES FOR OUTDOOR LIVING AREAS — **PROJECT:**

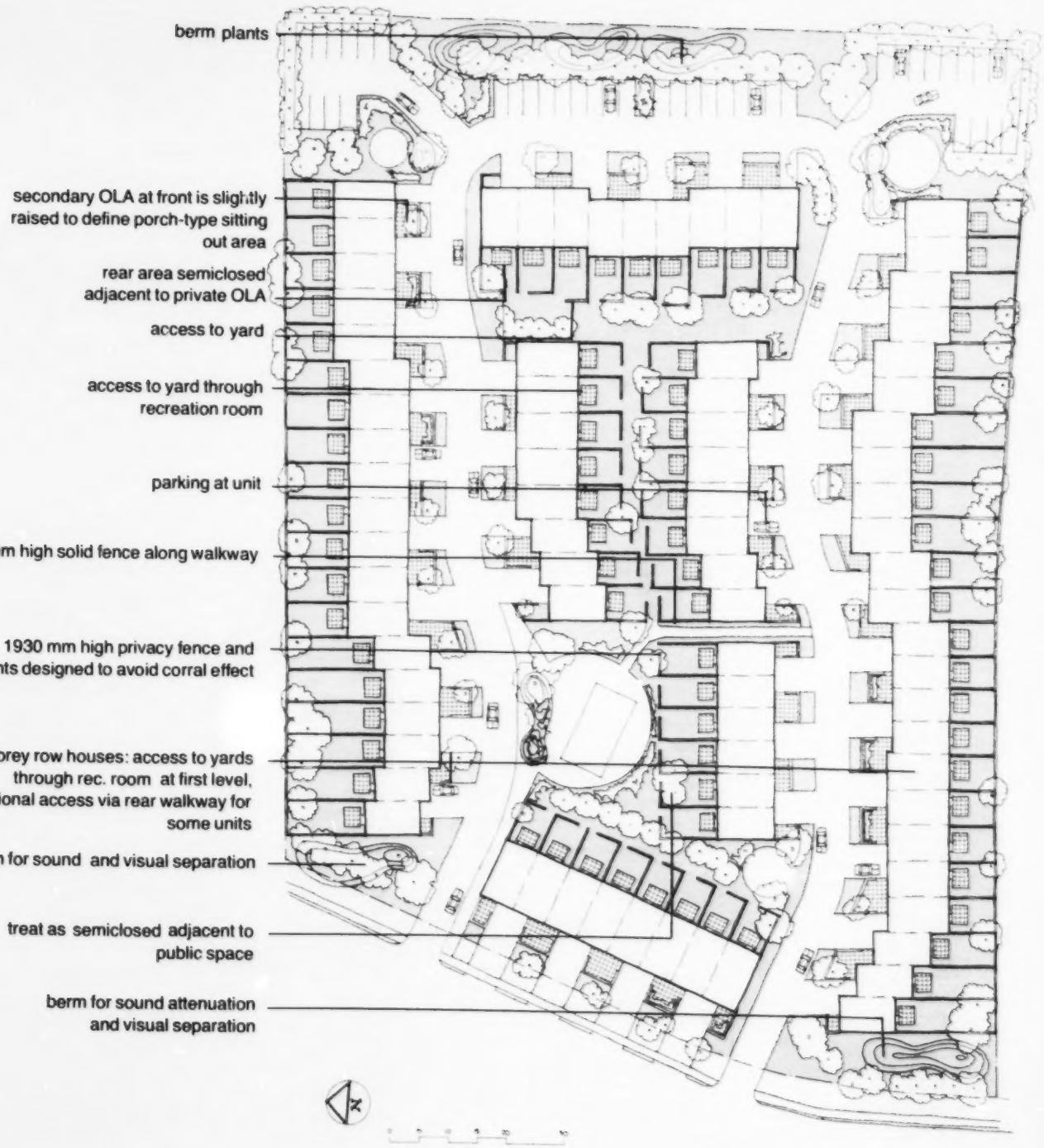
CHECKLIST

Description of Project: SUBURBAN CONDOMINIUM TOWNHOUSE PROJECT

Residential Users		Non Residential Users		Tenure		Size & Density		
Senior Citizens	0	Office	0	Freehold	0	Unit Type	No.	Site Area
		Retail	0	Condominium	✓	Bach.		2.08 ha
Single Persons	0	Common Parking	0	Co-op	0	1 BDR.		
Families — No Children	0	Other	0	Rental	0	2 BDR.		Units per
Families With Children	✓					3 BDR.	54	40/ha
Mix	0					4 - BDR.	28	
						Total	82	

Pages	Guideline	Relevant No	Relevant Yes	Notes and Remarks
	NEED			
	• families with children		✓	
	• handicapped			
	• elderly			
	• others			
	TYPE			
	• families with children		✓	
	• non-family			
	• elderly			
	— at grade		✓	
	— above grade			
	SIZE			
	• at grade			
	— family		✓	MIN. 46.5 m² - LARGEST 95 m²
	— non-family	✓		
	• above grade			
	— family	✓		
	— non-family			
	ACCESS FROM DWELLING			means of access provided
	• access from main living area		✓	ACCESS OFF RECREATION ROOM
	• supervision of children		✓	
	• additional access	✓		
	• to OLA at front	✓		
	• secondary OLAs		✓	BALCONIES OFF LIVING ROOM
	ACCESS FOR SERVICE			
	• detached and semis			
	• row housing			
	— rear lane		✓	PEDESTRIAN LANE
	— garage			
	— pass-through			
	— through unit		✓	THROUGH RECREATION ROOM
	NOISE			type of buffer provided if needed
	• buildings		✓	
	• berms			
	• walls		✓	AT END UNITS
	• space		✓	MIN 33m FROM SIDE TRACK
	• plants		✓	
	RELATIONSHIP OF OLA AT GRADE TO OTHER USES			distances or screening provided
	• open model			
	• semiclosed model		✓	18.3m BETWEEN UNITS
	• closed model		✓	9.15m TO PROPERTY LINE

Pages	Guideline	Relevant No	Relevant Yes	Notes and Remarks
	• facing other OLA or private use			
	• facing public use			
	• facing recreation area		✓	OR PEDESTRIAN WALKWAY SCREENED
	• exclusive use area			
	— size		✓	46.5 m²
	— screening		✓	930 mm HIGH
	RELATIONSHIP OF OLAS ABOVE GRADE TO OTHER USES			visual privacy
	• distance	✓		
	• angle	✓		
	• screening	✓		
	ORIENTATION			
	• sunlight		✓	ORIENTATION DETAILED BY LOCATION
	• wind protection	✓		OF RAILWAY
	• views	✓		SO MAJOR VIEWS
	SCREENING FOR PRIVACY AND TERRITORY			types of screening
	• at grade		✓	
	• above grade			
	• type			
	— solid			
	— semisolid		✓	VERTICAL BOARDS, OPEN UNITS
	— open			
	• material		✓	CEDAR, 1830 mm HIGH GENERALLY
	• plants		✓	TREES & SHRUBS
	• berming		✓	USUAL PROTECTION FROM ROAD
	SCREENS AND ENCLOSURES FOR MODERATING CLIMATE			types of screening
	• screens against wind/sun	✓		
	• enclosures	✓		
	— daylight in dwelling	✓		
	PLANTS			types of plants note hardiness characteristics
	• visual screening	✓		PREPARED BY LANDSCAPE
	• sun control			ARCHITECT
	• wind control			
	• visual impact	✓		PROTECTION FROM RAILWAY
	LIGHTING			guard against glare
	• glare avoided		✓	
	• provision of lighting		✓	AT PRIMARY OLA
	• waterproof outlet		✓	AT PRIMARY OLA
	SURFACES AND DRAINAGE IN OLAS AT GRADE			materials and slopes
	• surface material		✓	PRECAST CONCRETE PAVERS
	• variety of material	✓		
	• 2% slope		✓	
	SAFETY FEATURES IN OLAS ABOVE GRADE			guardrail design
	• guardrails			
	— safety for children		✓	SECONDARY OLA 2ND FLOOR
	— sense of security			
	— ledges avoided			
	STORAGE			storage units
	• OLAs above grade			
	• OLAs at grade		✓	AT GRADE WITHIN UNIT


berm plants
secondary OLA at front is slightly raised to define porch-type sitting out area
rear area semiclosed adjacent to private OLA
access to yard
access to yard through recreation room
parking at unit
1830 mm high solid fence along walkway
1930 mm high privacy fence and plants designed to avoid corral effect
3 storey row houses: access to yards through rec. room at first level, additional access via rear walkway for some units
berm for sound and visual separation
treat as semiclosed adjacent to public space
berm for sound attenuation and visual separation

STACKED AND ROW DWELLINGS: PARKING REMOTE

DESIGN GUIDELINES FOR OUTDOOR LIVING AREAS — PROJECT:

CHECKLIST

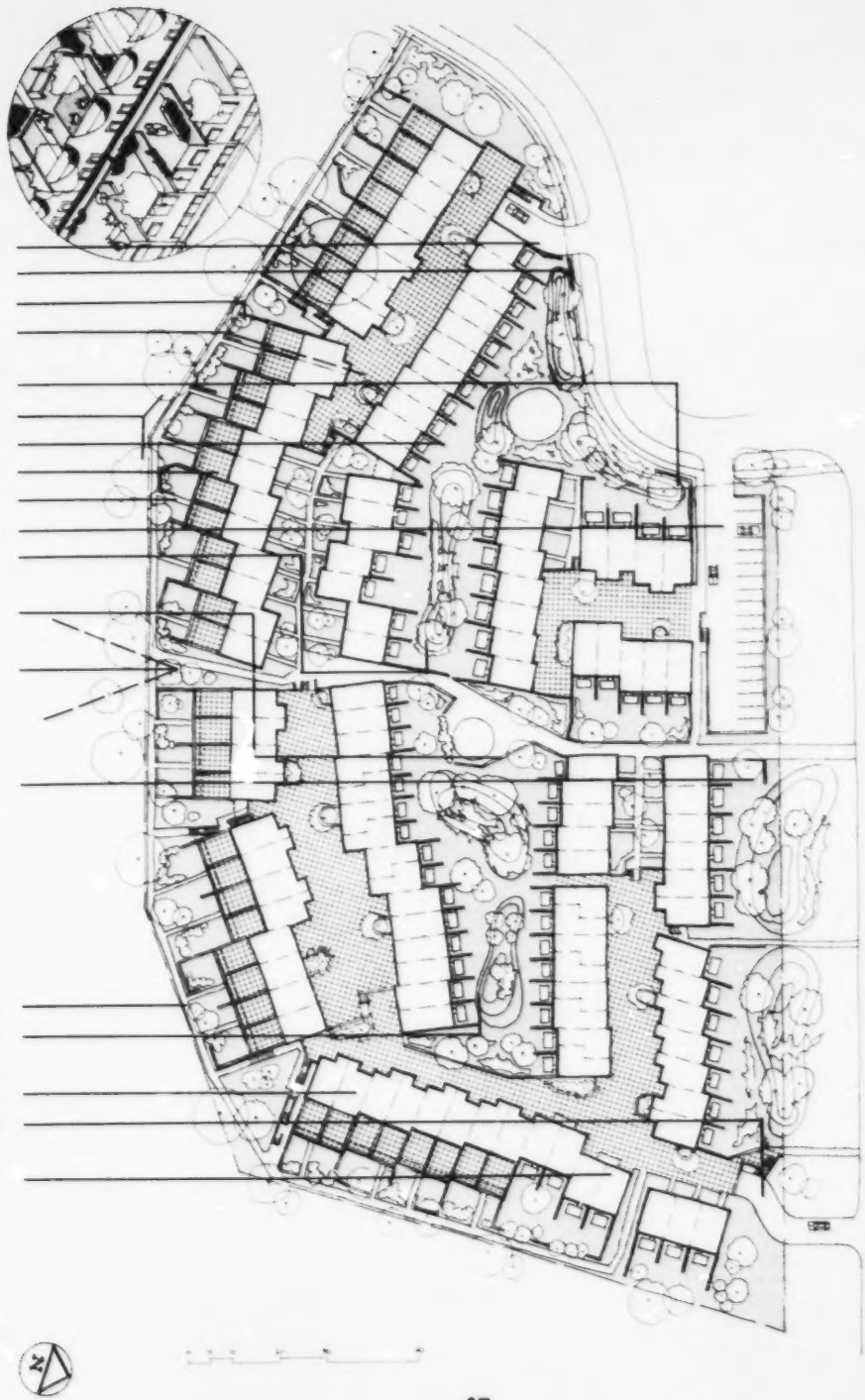
Description of Project: STACKED AND ROW DWELLING / PARKING REMOTE

Residential Users		Non-Residential Users		Tenure		Size & Density		
Senior Citizens	0	Office	0	Freehold	0	Unit Type	No.	Site Area 3.4 ha
		Retail	0	Condominium	0			
Single Persons	0	Common Parking	0	Co-op	0	Bach.		
				Rental	✓	1 BDR.		
Families — No Children	0	Other	0			2 BDR.		Units per 47/ha
						3 BDR.	117	
Families With Children	✓					4+BDR.	26	
Mix	0					Total	143	

Pages	Guideline	Relevant No	Relevant Yes	Notes and Remarks
	NEED			
	• families with children		✓	
	• handicapped			
	• elderly			
	• others			
	TYPE			
	• families with children		✓	
	• non-family			
	• elderly			
	— at grade		✓	
	— above grade		✓	STACKED UNIT AT RAISED EDGE
	SIZE			
	• at grade			
	— family		✓	56 m² TO 74 m²
	— non-family			
	• above grade			
	— family		✓	37 m² (TIERED UNITS)
	— non-family			
	ACCESS FROM DWELLING			means of access provided
	• access from main living area		✓	SLIDING DOORS FROM LIVING ROOM
	• supervision of children		✓	FROM LIVING ROOM
	• additional access	✓		LOWER RAISED UNITS,
	• to OLA at front		✓	FROM LIVING ROOM
	• secondary OLAs	✓		
	ACCESS FOR SERVICE			
	• detached and semis			
	• row housing		✓	
	— rear lane		✓	NEAR PEDESTRIAN LANE & FRONT LANE
	— garage			
	— pass-through			
	— through unit			
	NOISE			type of buffer provided if needed
	• buildings			
	• berms		✓	
	• walls			
	• space		✓	5.25 m SET BACK FROM LOTLINE
	• plants		✓	
	RELATIONSHIP OF OLA AT GRADE TO OTHER USES			distances or screening provided
	• open model		✓	21 m MIN. DISTANCE / 4.6 m LONG SCREENS
	• semiclosed model		✓	1830 mm HIGH SCREENS NEXT TO MAJOR PUBLIC USES
	• closed model	✓		

Pages	Guideline	Relevant No	Relevant Yes	Notes and Remarks
	• facing other OLA or private use		✓	OPEN, OLA LANDSCAPED
	• facing public use		✓	SCREENED
	• facing recreation area		✓	SCREENED
	• exclusive use area			
	— size		✓	27.8 m²
	— screening		✓	1830 mm HIGH SCREEN AT SIDES
	RELATIONSHIP OF OLAS ABOVE GRADE TO OTHER USES			visual privacy
	• distance	✓		
	• angle	✓		
	• screening		✓	SCREENED FULL DEPTH
	ORIENTATION			
	• sunlight		✓	MAJORITY OF UNITS FACE SOUTH OR EAST & WEST
	• wind protection	✓		
	• views		✓	VIEWS INTO RAVINE OF MAJOR IMPORTANCE.
	SCREENING FOR PRIVACY AND TERRITORY			types of screening
	• at grade		✓	1830 mm HIGH. 4.5 m IN DEPTH
	• above grade		✓	1830 mm HIGH. FULL DEPTH
	• type		✓	VERTICAL BOARDS.
	— solid			
	— semisolid		✓	OPEN SLOTS.
	— open			
	• material		✓	CEDAR
	• plants		✓	TREES & SHRUBS
	• berming		✓	ADJACENT TO ROAD AND INTERIOR GREENSPACES
	SCREENS AND ENCLOSURES FOR MODERATING CLIMATE			types of screening
	• screens against wind/sun		✓	SEMI SOLID PATIO SCREENS
	• enclosures	✓		
	— daylight in dwelling	✓		
	PLANTS			types of plants note hardiness characteristics
	• visual screening	✓		PREPARED BY
	• sun control			LANDSCAPE ARCHITECT
	• wind control			
	• visual impact	✓		
	LIGHTING			guard against glare
	• glare avoided		✓	LIGHT NOT DIRECTED DOWN IN PEDESTRIAN AREAS.
	• provision of lighting		✓	
	• waterproof outlet		✓	
	SURFACES AND DRAINAGE IN OLAS AT GRADE			materials and slopes
	• surface material		✓	CONC. PAVERS
	• variety of material		✓	GREES & PAVERS
	• 2% slope		✓	
	SAFETY FEATURES IN OLAS ABOVE GRADE			guardrail design
	• guardrails		✓	
	— safety for children		✓	SOLID CONCRETE RAILS
	— sense of security		✓	
	— ledges avoided		✓	SLOPED TOP SURFACE
	STORAGE			storage units
	• OLAs above grade		✓	STORAGE WITHIN UNIT ~~BUILT INTO PRIVACY SCREENS~~
	• OLAs at grade		✓	- LOWER RAISED UNITS HAVE STORAGE ROOM OFF FRONT OF UNIT

Townhouse and two-storey stacked units using open model for rowhouses. Terraces or OLAs at front of dwelling for stacked units. Access to OLAs is through the unit for stacked units.


access to underground parking
1830 mm high wall near garage access
1830 mm high screens
access through unit to OLA
1830 mm high fence to separate OLA from parking and access road
existing trees preserved
open model
terrace of upper unit over unit below
OLA at front of lower units
visitor parking
access around to OLA
1830 mm fence to separate OLA from tot lot and walkway
view of park and ravine from OLA at front of lower unit and OLA terrace
open model adjacent to public street
maximize separation by berming and plants to buffer OLAs from busy street
walkway to serve lower units
access to yard around units
stacked units with terraces above and OLA at front of lower units
access to underground parking
open model backing onto pedestrian way

INNER-CITY HIGH-DENSITY PROJECT WITH FAMILY UNITS

DESIGN GUIDELINES FOR OUTDOOR LIVING AREAS — PROJECT

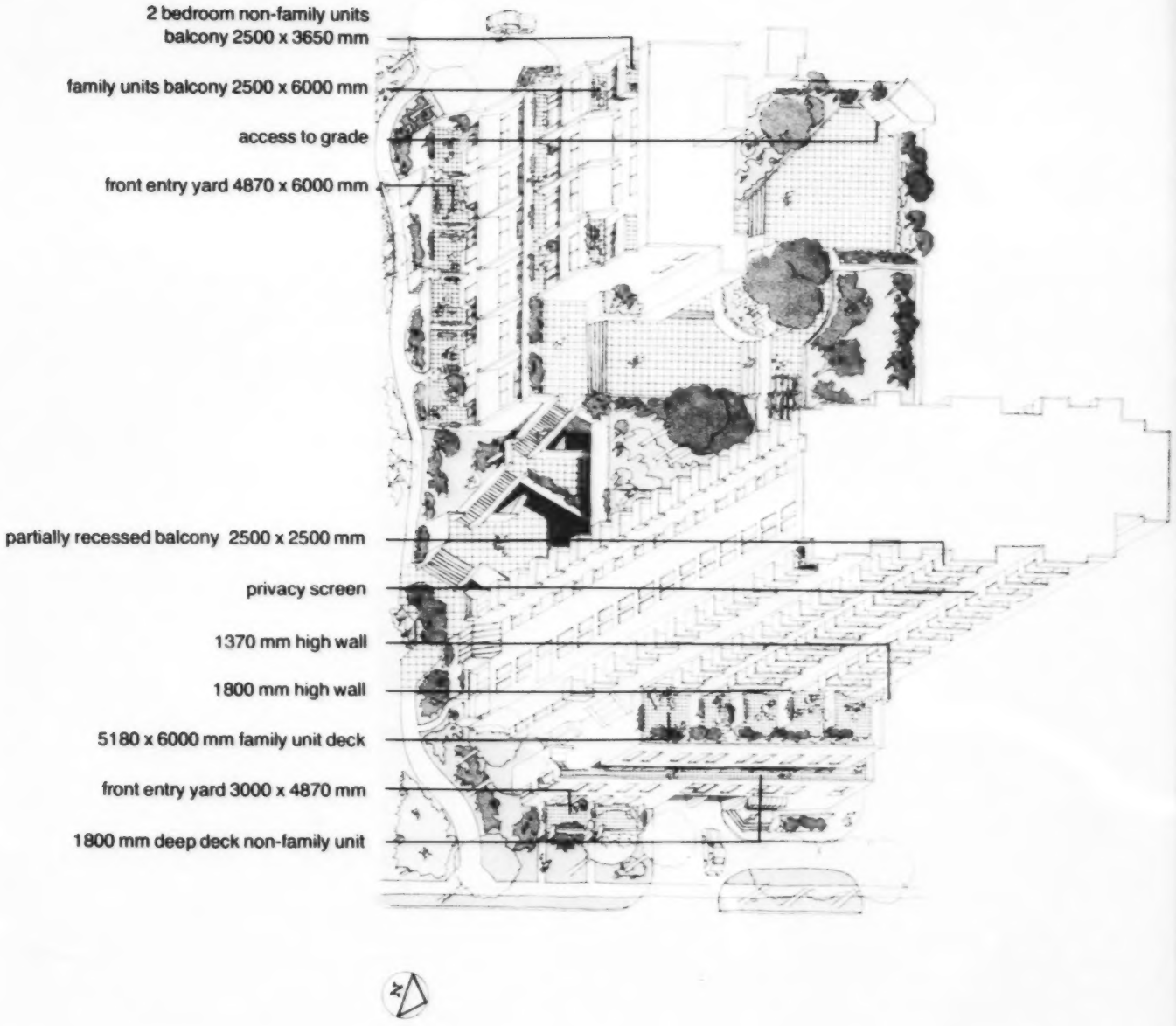
CHECKLIST

Description of Project: INNER CITY HIGH DENSITY PROJECT WITH FAMILY UNITS

Residential Users		Non Residential Users		Tenure		Size & Density		
Senior Citizens	.	Office	0	Freehold	0	Unit Type	No.	Site Area 0.58 ha
Single Persons	0	Retail	0	Condominium	0	Bach	19	
Families — No Children	.	Common Parking	.	Co-op	0	1 BDR	50	
Families With Children	.	Other	0	Rental	.	2 BDR	33	Units per 290 ha
Mix	0					3 BDR	11	
						4 - BDR	6	
						Total	169	

Pages	Guideline	Relevant No	Relevant Yes	Notes and Remarks
	NEED			
	• families with children		.	
	• handicapped		.	
	• elderly		.	ELDERLY & ROAD FAMILY
	• others ROAD FAMILY		.	SEE TO SIMILAR UNITS
	TYPE			
	• families with children		.	AT GRADE OR GRADE-RELATED
	• non-family		.	BALCONIES
	• elderly		.	BALCONIES
	— at grade		.	FAMILY UNITS
	— above grade		.	ROAD FAMILY & ELDERLY
	SIZE			
	• at grade or grade related			
	— family		.	28 m²
	— non-family			
	• above grade			
	— family		.	15m² – 30 m²
	— non-family		.	6.25 m² - 46 m²
	ACCESS FROM DWELLING			means of access provided
	• access from main living area		.	SLIDING DOORS
	• supervision of children		.	
	• additional access			
	• to OLA at front		.	SLIDING DOOR TO OLA
	• secondary OLAs	.		
	ACCESS FOR SERVICE			
	• detached and semis	.		
	• row housing	.		
	— rear lane			
	— garage			
	— pass-through			
	— through unit			
	NOISE			type of buffer provided if needed
	• buildings	.		
	• berms			
	• walls		.	
	• space			
	• plants		.	
	RELATIONSHIP OF OLA AT GRADE TO OTHER USES			distances or screening provided
	• open model	.		
	• semiclosed model		.	ONLY FOR UNITS AT GRADE & ON DECK
	• closed model	.		

Pages	Guideline	Relevant No	Relevant Yes	Notes and Remarks
	• facing other OLA or private use	.		
	• facing public use		.	WALL BETWEEN & CHANGE OF GRADE
	• facing recreation area	.		
	• exclusive use area			
	— size	.		27 m²
	— screening	.		MASONRY WALL
	RELATIONSHIP OF OLAS ABOVE GRADE TO OTHER USES			visual privacy
	• distance	.		
	• angle	.		
	• screening		.	
	ORIENTATION			
	• sunlight		.	EAST WEST & SOUTH ORIENTATION
	• wind protection		.	TRELLIS & PLANTING
	• views		.	SOUTH, EAST & WEST
	SCREENING FOR PRIVACY AND TERRITORY			types of screening
	• at grade		.	
	• above grade		.	
	• type			
	— solid		.	
	— semisolid			
	— open			
	• material		.	BRICK
	• plants			
	• berming		.	ON DECK
	SCREENS AND ENCLOSURES FOR MODERATING CLIMATE			types of screening
	• screens against wind/sun		.	TRELLIS (ON DECK)
	• enclosures	.		
	— daylight in dwelling			
	PLANTS			types of plants note hardiness characteristics
	• visual screening	.		
	• sun control	.		
	• wind control	.		
	• visual impact	.		
	LIGHTING			guard against glare
	• glare avoided		.	HOT LIGHTS DIRECTED DOWN
	• provision of lighting			WATER PROOF OUTLET PROVIDED
	• waterproof outlet		.	
	SURFACES AND DRAINAGE IN OLAS AT GRADE			materials and slopes
	• surface material		.	PAVED BRICKS AND CONCRETE
	• variety of material		.	MATERIALS FOR PRIVATE & PUBLIC AREAS ARE DIFFERENT
	• 2% slope		.	
	SAFETY FEATURES IN OLAS ABOVE GRADE			guardrail design
	• guardrails		.	
	— safety for children		.	
	— sense of security		.	SOLID TO 450 mm ABOVE FLOOR
	— ledges avoided		.	
	STORAGE			storage units
	• OLAs above grade			STORAGE WITHIN SUITES
	• OLAs at grade			STORAGE WITHIN SUITES


2 bedroom non-family units
balcony 2500 x 3650 mm
family units balcony 2500 x 6000 mm
access to grade
front entry yard 4870 x 6000 mm
partially recessed balcony 2500 x 2500 mm
privacy screen
1370 mm high wall
1800 mm high wall
5180 x 6000 mm family unit deck
front entry yard 3000 x 4870 mm
1800 mm deep deck non-family unit

INNER-CITY INFILL PROJECT

DESIGN GUIDELINES FOR OUTDOOR LIVING AREAS — PROJECT:

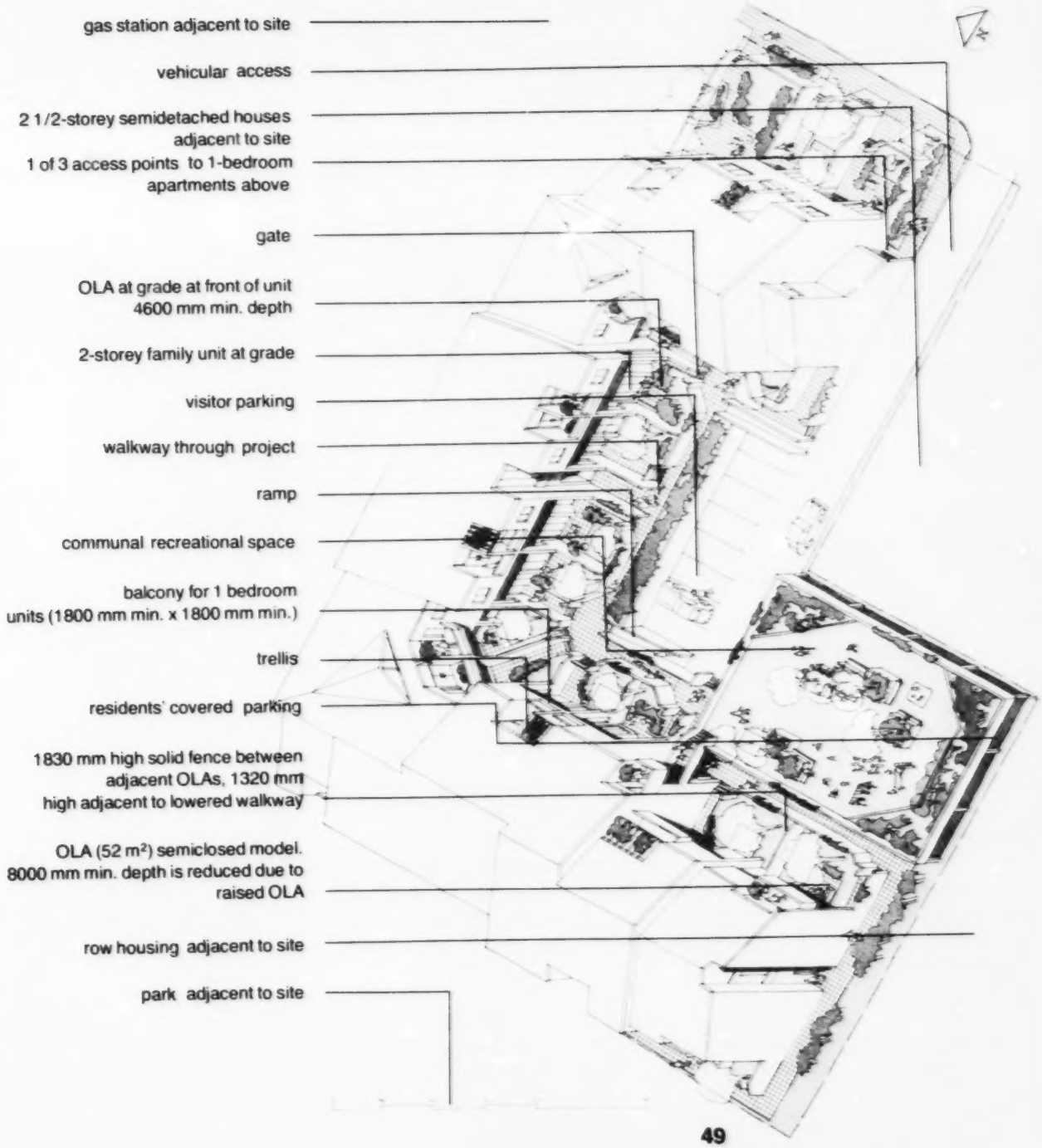
CHECKLIST

Description of Project: INNER CITY INFILL PROJECT

Residential Users		Non-Residential Users		Tenure		Size & Density		
Senior Citizens	0	Office	0	Freehold	0	Unit Type	No.	Site Area 0.41 ha
Single Persons	0	Retail	0	Condominium	0	Bach.		
Families — No Children	.	Common Parking	0	Co-op	√	1 BDR.	22	
Families With Children	.	Other	0	Rental	0	2 BDR.	14	Units per 111/ha
Mix	0					3 BDR.	10	
						4 - BDR.		
						Total	46	

Pages	Guideline	Relevant No	Relevant Yes	Notes and Remarks
	NEED			
	• families with children		.	
	• handicapped			
	• elderly			
	• others		.	DOG FAMILIES
	TYPE			
	• families with children		.	GRADE
	• non-family		.	ABOVE GRADE
	• elderly			
	— at grade		.	CLOSED AT REAR + IN FRONT
	— above grade		.	3RD FLOOR BALCONY
	SIZE			
	• at grade			
	— family		.	37 m² – 56 m² REAR (INFILL 28 m² AT STREET PROJECT)
	— non-family			
	• above grade			
	— family			
	— non-family		.	3.7 m² – 4.6 m² BALCONIES
	ACCESS FROM DWELLING			means of access provided
	• access from main living area		.	SLIDING DOORS
	• supervision of children		√	
	• additional access	√		
	• to OLA at front		.	SLIDING DOORS
	• secondary OLAs	√		
	ACCESS FOR SERVICE			
	• detached and semis	√		
	• row housing	√		
	— rear lane			
	— garage			
	— pass-through			
	— through unit			
	NOISE			type of buffer provided if needed
	• buildings		√	BUFFER FOR INNER OLA'S
	• berms			
	• walls		√	BUFFER FOR OUTER OLA'S
	• space			
	• plants		√	
	RELATIONSHIP OF OLA AT GRADE TO OTHER USES			distances or screening provided
	• open model	√		
	• semiclosed model	√		
	• closed model		√	

Pages	Guideline	Relevant No	Relevant Yes	Notes and Remarks
	• facing other OLA or private use	√		
	• facing public use		.	FULL HEIGHT WALL
	• facing recreation area	.		
	• exclusive use area			
	— size		.	FULL OLA (VARIES SEE OLA)
	— screening		.	MASONRY WALLS
	RELATIONSHIP OF OLAS ABOVE GRADE TO OTHER USES			visual privacy
	• distance	.		
	• angle	√		
	• screening		.	FULL HEIGHT SCREENING BETWEEN OLAS
	ORIENTATION			
	• sunlight		.	SOUTH, EAST AND WEST
	• wind protection	.		
	• views		.	TO PARK & NO OVERLOOK TO SOUTH) GARAGE ACROSS OF SITE
	SCREENING FOR PRIVACY AND TERRITORY			types of screening
	• at grade		.	FULL HEIGHT
	• above grade		.	BETWEEN BALCONIES
	• type			
	— solid		√	
	— semisolid			
	— open			
	• material		.	MASONRY
	• plants		.	TREES AND SHRUBS
	• berming		.	OLA AT GRADE, RAISED APPROX 762
	SCREENS AND ENCLOSURES FOR MODERATING CLIMATE			types of screening
	• screens against wind/sun	.		
	• enclosures	√		
	— daylight in dwelling			
	PLANTS			types of plants note hardiness characteristics
	• visual screening		.	PREPARED BY
	• sun control		√	LANDSCAPE ARCHITECT
	• wind control			
	• visual impact		√	
	LIGHTING			guard against glare
	• glare avoided		√	
	• provision of lighting		√	
	• waterproof outlet		√	
	SURFACES AND DRAINAGE IN OLAS AT GRADE			materials and slopes
	• surface material		√	BRICK & LOCKSTONE
	• variety of material		√	BRICK IN PUBLIC AREAS
	• 2% slope		√	
	SAFETY FEATURES IN OLAS ABOVE GRADE			guardrail design
	• guardrails			
	— safety for children		√	PICKET RAILS
	— sense of security		√	DEEP TOP RAIL
	— ledges avoided		√	
	STORAGE			storage units
	• OLAs above grade		√	WITHIN UNITS
	• OLAs at grade		√	IN BASEMENT (CORRIDOR ACCESS)


gas station adjacent to site
vehicular access
2 1/2-storey semidetached houses adjacent to site
1 of 3 access points to 1-bedroom apartments above
gate
OLA at grade at front of unit 4600 mm min. depth
2-storey family unit at grade
visitor parking
walkway through project
ramp
communal recreational space
balcony for 1 bedroom units (1800 mm min. x 1800 mm min.)
trellis
residents' covered parking
1830 mm high solid fence between adjacent OLAs, 1320 mm high adjacent to lowered walkway
OLA (52 m²) semiclosed model. 8000 mm min. depth is reduced due to raised OLA
row housing adjacent to site
park adjacent to site

PART IV: APPENDICES

Appendix 1. Background to the Design Advice

The design advice in this publication is based on an investigation of user requirements for outdoor living areas. The investigation focused on the needs of various occupant groups and included a review of available research on user requirements as well as field research in the major urban areas of Canada. The field research sought to identify important differences in the use of space outside the dwelling that reflected a variation in climate, topography and regional attitudes. The field research also sought to collect detailed design data on how the needs for an outdoor living area were being met in various parts of Canada.

The literature on outdoor living areas identified a number of needs and opportunities. First, a private outdoor space directly related to the dwelling was given high priority by all groups of occupants, but especially by families, the elderly and the handicapped. A secure, supervisable area where children could play was important in family housing. The elderly and the handicapped identified the need for relief from the isolation and confinement of one's apartment.

Typical uses of an outdoor living area in family housing were play, gardening, sunbathing, barbecuing and dining outdoors, adult socializing, clothes drying and storage. Uses for the elderly and handicapped were sitting outside, viewing activities and socializing with friends and relatives. Direct visual and physical access from the kitchen was identified as important in family housing.

Recommended minimum depths for outdoor living areas above grade ranged from 2 to 3 m, with a total area of between 3 to 10 m^2. It was found that use of an above-grade outdoor living area increased as its size increased. Recommended minimum sizes for outdoor living areas at grade varied from 19 to 74 m^2. More space was always seen as better than less space.

Privacy was considered a basic requirement for an outdoor living area. Visual privacy and clear territorial definition were found to be more important than auditory privacy. Eye-level-high screening between outdoor living areas and adjacent public uses was important.

Outdoor living areas at grade should have both hard and soft surfaces. Hard surfaces were important in heavy traffic areas. Plants should be hardy enough to endure children's play. Good drainage as well as a storage area were considered important.

Outdoor living areas above grade should have a railing design that

enhances a sense of security, particularly in housing for the elderly. Railing design should allow children and seated adults a view, but not provide footholds for climbing. Spacing on the railing should not allow children to squeeze through or allow objects to pass through or roll under.

Regional variation was significant. Whereas the outdoor living area is considered a space for family activities and is heavily used in most parts of the country, this was not the case in the Maritimes, where more emphasis was placed on passive use, such as gardening and storage. Residents of Ontario and British Columbia preferred a large measure of privacy. In the Prairie provinces, it was found that the desire to maintain a view of the horizon often outweighed the desire for visual privacy. In general, as city size increased, visual privacy and outdoor living areas above grade were given greater priority.

The importance attached to orientation had regional variation. Some jurisdictions in Quebec and Ontario have established minimum requirements for sunlight in the outdoor living area. Whereas a southern exposure was the most preferred in Central Canada and on the West Coast, this was not the preference on the Prairies. Here the intensity of the summer sun was a problem, particularly in the late afternoon. Glare and the problem of controlling sunlight penetration into the dwelling created a preference for easterly orientations. In the Maritime provinces, sun was a less important factor than wind in influencing choice of orientation.

Surprisingly, no relationship between climate and use of an outdoor living area was uncovered. Expectation would lead to the belief that the more temperate the climate the greater the use of the outdoor living area. However, it would seem that a harsh climate can encourage very intensive use whenever possible. As a consequence, although the patterns of use may vary, the outdoor living area plays an equally important role in all regions.

In all regions there was agreement that an outdoor living area for family housing should be at grade and provide direct access to neighbourhood activity areas. Outdoor living areas below grade were not considered ideal because of drainage problems and lack of privacy caused by overlook from adjacent areas. The need for grade-related outdoor living areas was not seen to have great importance in non-family housing.

The above variations notwithstanding, most people desire an outdoor living area directly related to their dwelling. The highest priority for this outdoor space was given to families with children occupying medium-density housing projects. Provision for the removal and storage of winter clothing and boots at the point of access between the outdoor living area and the dwelling was important. Less priority was given to the need to provide a private exterior space for senior citizens and singles. However, it was concluded that, in all cases, direct access to an outdoor space has important psychological benefits and contributes directly to the quality of housing.

Appendix 2. Checklist

DESIGN ADVICE FOR OUTDOOR LIVING AREAS — PROJECT:

CHECKLIST

Description of Project

Residential Users		Non-Residential Users		Tenure		Size & Density		
Senior Citizens	0	Office	0	Freehold	0	Unit Type	No.	Site Area
Single Persons	0	Retail	0	Condominium	0	Bach.		
Families — No Children	0	Common Parking	0	Co-op	0	1 BDR.		
Families With Children	0	Other	0	Rental	0	2 BDR.		Units per acre
Mix	0					3 BDR.		
						4 + BDR.		
						Total		

Pages	Guideline	Relevant No	Relevant Yes	Notes and Remarks
	NEED			
	• families with children			
	• handicapped			
	• elderly			
	• others			
	TYPE			
	• families with children			
	• non-family			
	• elderly			
	— at grade			
	— above grade			
	SIZE			
	• at grade			
	— family			
	— non-family			
	• above grade			
	— family			
	— non-family			
	ACCESS FROM DWELLING			means of access provided
	• access from main living area			
	• supervision of children			
	• additional access			
	• to OLA at front			
	• secondary OLAs			
	ACCESS FOR SERVICE			
	• detached and semis			
	• row housing			
	— rear lane			
	— garage			
	— pass-through			
	— through unit			
	NOISE			type of buffer provided if needed
	• buildings			
	• berms			
	• walls			
	• space			
	• plants			
	RELATIONSHIP OF OLA AT GRADE TO OTHER USES			distances or screening provided
	• open model			
	• semiclosed model			
	• closed model			

Pages	Guideline	Relevant No	Relevant Yes	Notes and Remarks
	• facing other OLA or private use			
	• facing public use			
	• facing recreation area			
	• exclusive use area			
	— size			
	— screening			
	RELATIONSHIP OF OLAs ABOVE GRADE TO OTHER USES			visual privacy
	• distance			
	• angle			
	• screening			
	ORIENTATION			
	• sunlight			
	• wind protection			
	• views			
	SCREENING FOR PRIVACY AND TERRITORY			types of screening
	• at grade			
	• above grade			
	• type			
	— solid			
	— semisolid			
	— open			
	• material			
	• plants			
	• berming			
	SCREENS AND ENCLOSURES FOR MODERATING CLIMATE			types of screening
	• screens against wind/sun			
	• enclosures			
	— daylight in dwelling			
	PLANTS			types of plants note hardiness characteristics
	• visual screening			
	• sun control			
	• wind control			
	• visual impact			
	LIGHTING			guard against glare
	• glare avoided			
	• provision of lighting			
	• waterproof outlet			
	SURFACES AND DRAINAGE IN OLAS AT GRADE			materials and slopes
	• surface material			
	• variety of material			
	• 2% slope			
	SAFETY FEATURES IN OLAS ABOVE GRADE			guardrail design
	• guardrails			
	— safety for children			
	— sense of security			
	— ledges avoided			
	STORAGE			storage units
	• OLAs above grade			
	• OLAs at grade			

APPENDIX 3. DEFINITIONS

Above Grade

Having no direct access to the ground within the boundaries of the dwelling or its adjacent exterior spaces.

Amenity Area

Space outside the dwelling designed for the active use and passive enjoyment of the occupants.

At Grade

Having direct access to the ground from within the dwelling or its adjacent exterior spaces. An intensively developed roof deck no more than 7 m above the natural ground may be considered to provide an "at grade" situation.

Balcony

An exterior floor area above grade provided with access from an adjoining dwelling.

Everyday Living Activities

The normal day-to-day cycle of activities of an individual or family inhabiting a residential environment.

Family Housing

A dwelling containing two or more bedrooms not exclusively designed for the use of non-family groups.

Habitable Rooms

All rooms or spaces intended for human occupancy in a dwelling.

Housing for the Elderly

A dwelling designed to accommodate the changing physical capacities of older adults.

Housing for the Handicapped

A dwelling designed to accommodate the physical capacities of the infirm or injured.

Issue

A question to be resolved in the planning or design of an environment.

Outdoor Living Area

An outside space immediately adjacent to and accessible from a dwelling and capable of accommodating a variety of individual outdoor activities.

Performance Criteria

Objectives to be achieved in the design and planning of an environment.

Pergola

A structure consisting of posts supporting an open roof in the form of a trellis.

Preschool Age

Children ranging in age from infancy to 6 years of age.

Principal Habitable Rooms

The kitchen, dining and living rooms of a dwelling.

Private Area

That part of the outdoor living area providing visual privacy from adjacent areas.

Public Area

Any exterior space not for the exclusive use of the occupants of an individual dwelling.

Roof Deck

An exterior space on a building intensively developed as an artificial grade.

School Age

Children 6 to 14 years of age.

Site Planning Criteria

The document containing the recommended site planning standard for housing eligible for National Housing Act assistance.

Terrace

A flat roof or open platform adjacent to and provided with access from a dwelling.

Index

Access, 15, 23, 24, 26, 43, 45
Above grade, 14-16, 32, 33, 35, 42, 44, 46, 48, 51, 53, 55
Amenity space, 3, 4, 11, 16, 55
At grade, 15, 16, 24, 35, 39, 42, 44, 46, 48, 51-53, 55

Balcony, 4, 9, 10, 14, 16, 45, 55
Berm, 28, 30, 42-44, 46, 48, 53
Boundary, 9, 27, 28

Canopies, 36
Children, 15, 40, 42, 44, 46, 48, 52, 53
Circulation system, 23
Climate, 16, 52
Clothes drying, 3, 51
Community facilities, 16, 19
Condominium, 27, 42
Cooperative housing, 27
Cost, 11, 15

Density, 19
Design, 5, 21, 29, 41, 52
Detached housing, 16, 26, 42, 44, 46, 48, 53
Distance, 30

Eating, 3, 4
Elderly, 11, 12, 15, 16, 24, 42, 44, 46, 48, 51-53, 55
Electrical outlet, 38
Elevation, 24, 38
Enclosure, 3, 4
Energy conservation, 24
Entertaining, 3, 4, 17
Entry, 24

Family housing, 9, 11, 13-16, 23, 42, 44, 46, 52, 53, 55
Fencing, 28
Flooring, 26
Floor finish, 24, 25

Garage, 26, 42, 44, 46, 48, 53
Gardening, 3, 25, 51, 52
Glare, 31, 42, 44, 46, 52, 53
Guardrail, 32, 40

Handicapped, 11-16, 24, 42, 44, 46, 51, 53, 55
Handrail, 12
Heat, 31
Hose bib, 38

Identity, 3

Light fixture, 38
Lighting, 42, 44, 46, 53

Maintenance, 9, 18, 25, 38
Masonry, 30
Microclimate, 9
Mobility, 16

Non-family housing, 13-15, 45, 52
Noise, 29, 30

Occupant, 9, 13, 17, 19, 27, 31, 37
Orientation, 3, 31-33, 52
Overshadowing, 32

Parking, 43, 45, 47
Patio doors, 24
Pergola, 19, 56
Pets, 3
Planning, 29, 37
Plants, 18, 28, 30, 33, 38, 42-46, 48, 51, 53
Play, 3, 4, 9, 19, 23, 24, 51
Privacy, 3, 9, 17-20, 24, 38, 43, 47, 51
Public areas, 29

Recreation, 9, 12, 25, 42, 44, 46, 48, 53
Rental, 27
Repair, 25
Residential environment, 3, 11
Roof: deck, 16, 56; patio, 10
Row housing, 16, 26, 30, 42, 44-48, 53

Safety, 4, 42, 44, 46, 48, 53
Screening, 3, 18-20, 33, 38, 42, 44, 46, 48, 53
Screens, 19, 27, 33, 35, 36, 42, 44, 46, 48, 51, 53
Security, 3, 9, 40
Semi-detached housing, 16, 26, 42, 44, 46-67, 53
Shade, 31
Shelter, 35
Shutter, 33
Site planning, 19, 21
Site Planning Criteria, 1, 3, 5, 56
Slope, 39
Socializing, 9, 51
Sound pressure level, 29
Space: exterior, 7, 9; interior, 23-25; living, 25; public, 27, 43; separation, 18-20
Stacked units, 45
Storage, 3, 38, 51, 52
Street, 24, 25, 29, 45
Sunbathing, 3, 4, 17, 32, 51
Sunlight, 17, 31-33, 42, 44, 46, 48, 52, 53
Supervision, 42, 44, 46, 48, 53
Surface, 38, 39, 42, 44, 46, 48, 51, 53

Terrace, 4, 10, 45, 56
Trees, 33, 36, 45
Trellis, 19, 33, 47
Trespassing, 28
Tools, 38
Toys, 4, 38

Ventilation, 17
Views, 15-17, 20, 42, 44, 46, 48, 52, 53

Walkway, 43, 45, 49
Walls, 28
Wheelchair, 12-14, 24
Wind: 4, 16, 35, 36, 52; protection, 42, 44, 46, 48, 53; turbulence, 35